The Persistence Pyramid:

Factors Related to Persistence for Low-Income Students in Baccalaureate Programs

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Dedication

This dissertation is dedicated to past, present, and future low-income college students. My heartfelt congratulations to those who have earned a degree, I recognize the many challenges that you likely faced on your road to degree completion. For those who have not yet earned the degree, I hope you get the opportunity to continue and to earn that degree at some point. For those who are actively seeking their college degree, I wish you the best of luck and may you find the resources and support that you need to cross the finish line. For future low-income college students, I hope our nation and our institutions seek to reverse the trend of shrinking opportunity and reduced class mobility. I hope you have the opportunity to pursue a college degree and I hope you receive the financial and educational support that you require to reach degree completion. I hope you are successful. For those with so little material wealth, and yet so much promise for success, I hope you have hope.

Abstract

Low-income students earn bachelor's degrees at significantly lower rates than their high-income peers. This qualitative study interviewed 21 Fall 2008 full-time first-year Pell Grant recipients in May 2012 when almost all were near the point of baccalaureate degree completion at a large urban doctoral-granting institution with very high research activity. The Persistence Pyramid was a conceptual framework created by the author to organize the previous persistence research into four thematic areas related to individual student factors that affect persistence, and four thematic areas related to campus-based environmental factors that affect persistence. The four student areas include economic, social, psychological, and academic factors. The four campus factor areas include educational and curricular support, support for diversity and community, involvement opportunities, and a caring culture. The Persistence Pyramid was employed as a lens to ascertain which factors have the greatest impact on persistence from the perspective of successful low-income students. The study utilized a case study approach to illustrate how various factors interacted with each other to enhance persistence, hinder persistence, or mute negative risk factors.

The Persistence Pyramid was a useful framework for illuminating which themes were most salient to the persistence of low-income students. The persistence factors related to economics were the most prevalent and had the greatest effect, potentially negative, on students' persistence. These economic factors also interacted the most with other persistence factors, often preventing the full utilization of persistence enhancers that students could have employed to their advantage. Seven other factor areas in the

Persistence Pyramid were found to be relevant and all had particular themes of persistence that illustrated factors that helped or hindered persistence for low-income students. Two particular themes emerged as especially helpful in students' ability to persist. Under the social area, relying on friends for emotional support and academic assistance was especially useful for these students. Under the involvement area, over three-fourths of students served as a mentor or tutor and most of these students indicated that this experience was one of the most beneficial in improving their ability to persist to degree completion.

Employing a pragmatic perspective, this study has numerous implications for recommendations to improve the baccalaureate attainment rate for low-income students. Suggestions for increasing baccalaureate degree attainment for low-income students include: Institutions could provide low-income students with campus jobs that will build career-specific skills. Institutions could develop programs to ensure that all students have a mentor and serve as a mentor. Student-service personnel could develop ways for students to utilize campus resources and support services earlier in their college careers. Students could ensure that they take advantage of numerous involvement opportunities, especially serving as a mentor or tutor. Students could make an effort to establish deep friendships and provide emotional support and encouragement to each other. Students could spend time studying with friends and classmates and serving as academic resources for each other.

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Chapter 1

Introduction: The Persistence Problem

In 2009, the United States President Barack Obama declared a goal for the United States to regain its former position as the nation with the largest percentage of college graduates (Nichols, 2011). Currently the United States ranks 12th on this measure. To reach first place, the United States would need to increase the number of adults aged 25-64 with college baccalaureate degrees from 41% to 60%. Although the United States has the highest participation in post-secondary education, this participation does not translate to an equivalent bachelor's degree attainment rate. If the graduation rate for students in the bottom half of the income scale could be raised to 58.8% to equal the current rate for students in the top half, the United States would exceed its goal of being first in the world for percentage of college graduates (Nichols, 2011).

The overall graduation percentages in the United States have not changed much in the last 30-40 years. The eight-year graduation rates for bachelor's degrees were 67% for the high school class of 1992 that immediately enrolled at a four-year institutions, compared to 66% for the high school classes of 1982 and 1972 (Carey, 2004). For students in the 2003 cohort who began at four-year institution, only 58 percent had earned a degree six years later (Radford, Berkner, Wheeless, & Shepherd, 2010). Of those students, those who come from the highest-income families ($92,000 or more) had a six-year baccalaureate graduation rate of 76.4%, while those from the lowest-income income families (less than $32,000) had a six-year graduation rate of only 47.1%. Among all college students in the 2003 cohort (not just those who began at a four-year

institution), the lowest-income group had a six-year bachelor's degree attainment rate of 25.5%, while the highest-income students had a rate of 58.6% (Radford, Berkner, Wheeless, & Shepherd, 2010). Certain groups of students have seen significant improvement in graduation rates over time, but almost all of those gains have gone to the affluent. For example, from 1972 to 2010, high-income Americans who earned a bachelor's degree by age 24 improved their degree attainment rate by 58 percentage points. Low-income students increased their rate during this same period by only 1 percentage point (Rotherham, 2011). The most current estimates suggest that 83% of children in the top quartile of family income earn a bachelor's degree by age 24, but that rate is only 8% of children in the bottom quartile of family income (Mortenson, 2013).

Low-income students are disproportionately represented in the group of students who do not earn a bachelor's degree. According to the Spellings report, "only 36 percent of college-qualified low-income students complete bachelor's degrees within eight and a half years, compared with 81 percent of high-income students" (U.S. Department of Education, 2006, p. 9). The gap in persistence rates for low-income students is significant even when compared to middle-income students. In one study, students with family incomes under $35,000 had a 65 to 72% greater chance of not persisting compared to students with family incomes over $50,000 (Ishitani, 2006).

In addition, many low-income students are also students of color and/or first-generation students, all of whom experience lower degree attainment rates (Terenzini, Cabrera, & Bernal, 2001). Of the students in the 1992 cohort, over 55% of those who were in the lowest socioeconomic status (SES) quartile were students of color, compared

to less than 15% from the highest-SES quartile. Even more dramatic, over 75% of those in the lowest-SES quartile were first-generation students whose parents had no college experience, compared to less than 1% from the highest-SES quartile (Terenzini, Cabrera, & Bernal, 2001). Students who are included in more than one at-risk demographic group, such as being low-income students, and first-generation students, and/or students of color, have a significantly decreased chance of degree attainment. For example, in 2000, the bachelor's degree attainment rate by age 26 was only 9% for first-generation students in the lowest income quartile compared to 68% for students in the highest-income quartile who had at least one parent graduate from college (Bowen, Chingos, & McPherson, 2009).

Significance of the Persistence Problem for Low-Income Students

The low persistence and graduation rates represent a genuine problem for low-income students because 42% of all jobs require a post-secondary degree and almost all new jobs being created require post-secondary education (Haveman & Smeeding, 2006). By 2018, 62% of jobs in the United States are projected to require post-secondary education, and employers will need three million more employees with postsecondary degrees than the United States is projected to have by that time (Sparks & Waits, 2011). Increasingly, a baccalaureate degree is one of the best ways for people to improve their long-term future financial and employment stability, even though in the current economy many recent college graduates face clear challenges in finding meaningful employment immediately after graduation. The median earnings difference for male college graduates compared to male high school graduates has increased from 22% in 1972 (Baum &

Payea, 2004) to 74% in 2008 (Baum, Ma, & Payea, 2010). This earnings differential is even more pronounced for women. In 2008, women with a bachelor's degree earned 79% more than women with only high school credentials (Baum, Ma, & Payea, 2010).

Lifetime earnings for a person with a bachelor's degree will be almost twice that of a high school graduate (U.S. Department of Education, 2006). College graduates earn more money, increase tax revenues, and are more likely to be employed (Baum, Ma, & Payea, 2010). In 2010, the unemployment rate for adults aged 25-64 was only 5% for those with at least a bachelor's degree compared to 12% for those with only a high school degree and 17% for those with no high school degree (Snyder & Dillow, 2012).

Unfortunately, low-income students are finding it increasingly difficult to take advantage of all the benefits of earning a college degree because the costs keep rising and financial aid is not keeping pace with the increasing costs. From 1971 to 2009, tuition at four-year public institutions increased 1,767%, while the consumer price index went up by only 432% (Heller, 2013). In 1971, families in the lowest-income quintile had to contribute 20% of their income to cover costs but by 2008 the lowest-income families need to cover 90% of their income to cover the costs. Many of these low-income families do not receive enough financial aid to cover the cost of attendance. In 1972, the maximum Pell Grant covered 85% of the cost of attendance but by 2009 the maximum award covered less than 35% of costs at a four-year public institution (Heller, 2013).

In addition to individual benefits, there are additional societal benefits for encouraging higher education completion, including reduced unemployment, reductions in needs for social services, reductions in incarcerations, a higher tax base, fewer

smokers, and increases in volunteer work, voting, and overall good health (Baum &

Payea, 2004). Therefore, low graduation rates negatively impact society as a whole and

have significant consequences for individuals who do not graduate. These systemic and

individual consequences are greater and more concentrated in low-income communities

due to the disproportionate numbers of those students who do not persist until graduation.

Thus, the continuing wealth disparity and cycle of poverty is especially pronounced for

the lowest-income group. Several studies have called for the need to improve retention

and degree completion for low-income students, especially at large public institutions

where increasing numbers of low-income students attend college (Engle & O'Brien,

2007). If nothing is done, the continuing low rates of persistence and degree attainment

will have negative effects for these students, their future earning potential, and for society

as a whole in terms of the future workforce (Engle & O'Brien, 2007).

Definition of Terms

The terms *retention* and *persistence* are often used interchangeably in higher

education, but with some subtle differences. *Retention* generally refers to an institution's

retention of a cohort of students from one year to the next, sometimes specifically a group

of students continuing from the first to the second year. *Persistence* generally refers to an

individual student's ongoing enrollment in higher education to the point of graduation.

Persistence is typically thought of as progress from an individual student's perspective

compared to *retention*, which is more typically considered from an institutional

perspective and often includes an entire cohort of students.

I will be utilizing these common definitions, but my focus is on persistence. This is not to say that I hold students wholly responsible for their success or lack thereof, but rather I believe that this issue is best viewed from the perspective of the individual student. Both students and institutions share responsibility for ensuring student success. As a result, I will be utilizing both retention research and persistence research. If students are not retained from one year to the next, then they cannot persist until graduation. Persistence cannot be achieved without retention, but retention alone does not guarantee persistence and degree attainment. Also, when I use the term *degree attainment,* I am referring to the earning of a bachelor's degree. Although retention and persistence are important for almost all students in higher education, due to the significant benefits achieved for the individual and the community that occur with bachelor's degree attainment, I am focusing on the completion of the four-year baccalaureate degree.

I am defining *low-income* students as those who are eligible to receive a Pell Grant. For the 2011-2012 school year, students whose parents had an Adjusted Gross Income of $31,000 or less had an automatic zero Expected Family Contribution, which means that they would be eligible for the maximum Pell Grant. Students whose families have an Adjusted Gross Income of less than $50,000 may qualify for a prorated Pell Grant. For 2010-11 Pell Grant recipients, almost three-fourths had family incomes below $30,000 and the median income was around $16,000 (National Association of Student Financial Aid Administrators [NASFAA], 2011).

Purpose of Study

As noted earlier, stagnant baccalaureate graduation rates are a serious issue in the United States. This issue is exacerbated for low-income students who graduate at significantly lower rates than their higher-income peers. Over four decades of persistence research, including a significant portion focused specifically on low-income students, have provided researchers and institutions with a wealth of information about risk factors and various programs, activities, and characteristics that either help or hinder persistence for low-income students. However, most institutions have not been able to significantly close the gap in persistence rates for low-income students. Most of the persistence research has been quantitative in nature and has resulted in a plethora of information on risk factors. Much of the qualitative retention research that has been done has focused on broader campus climate issues and has not examined individual students' decision-making, or it has focused on students who stopped out. Plus, much of the overall retention research has been on first- and second-year students and less research has identified those individual and institutional factors related to persistence in the latter years.

As a result, the extant research has provided some basic explanations as to why low-income students stop-out, but it has not provided a nuanced understanding of the interaction between various persistence factors or the decision-making process for low-income students who find a way to persist to graduation. This study explored that nuanced understanding by interviewing low-income students who were successful in their fourth year or beyond and nearing graduation. Employing a collective, or embedded, case

study approach, I explored the interplay between various factors in their personal and

school life to understand which persistence factors are most salient for them. I

investigated how various factors intersected, and what students believed was most helpful

in allowing them to persist. The goal of this qualitative study was twofold: (a) to develop

some practical suggestions for students and institutions in order to increase graduation

rates for low-income students; and (b) to discover which persistence factors low-income

students believed to be most salient to their persistence decisions, in hope that those

factors could be tested further with additional qualitative and quantitative research. With

those goals in mind, I approached this study by attempting to answer the following two

research questions.

Research Questions

1. What factors are most salient for low-income college students in articulating

   their ability to persist?

2. How do various factors of persistence interact with each other to enhance or

   hinder low-income students' efforts toward baccalaureate degree attainment?

<div align="center">**Overview and Outline**</div>

Answering the aforementioned research questions is the next step in the ongoing

process of addressing the persistence problem for low-income students. The findings

from this study may also provide clues to solving the overall problem of persistence for

students in the U.S. higher education system. Considering the amount of resources

funneled into undergraduate education, personal resources as well as federal and state

resources, the United States as a whole would benefit by increasing the percentage of

matriculated students that actually earn a bachelor's degree. Focusing on low-income students, a group of students that has one of the largest gaps in graduation rates, is a good place to begin exploring ways to increase persistence and subsequent attainment of a four-year degree.

I begin Chapter 2 with a review of the history of retention research, and then organize the existing persistence research into a conceptual framework that was utilized in this study. Chapter 3 presents the approach and methodology that was employed in this study. This case study inquiry, primarily based on interviews with low-income students, was modeled on the existing persistence research outlined in Chapter 2. Chapters 4 and 5 contain the results of this study. Chapter 4 begins with a description of the study site and includes demographic information for the student participants from my sample. Next, I introduce each of the students in this study by sharing some personal information for each student and a bit about their experience as a low-income college student. Chapter 4 also includes initial quotations for each student, so the reader can get a more nuanced understanding of the students in the study and gain an appreciation for the voices that form the results of the study. Chapter 5 contains all the remaining results and explains the students' experiences in each theme by employing quotes from the students' interviews. Chapter 6 includes a summary discussion of the results from this study and explains which factors and themes were most salient to persistence from the perspective of this group of low-income students. I have included numerous recommendations based on the implications from this study. I conclude with limitations of the study and suggestions for future research.

Chapter 2

Literature Review and Conceptual Framework

Issues of retention and persistence are one of the most researched topics in higher education, yet, as noted earlier, significant issues remain. The body of literature in this area is extensive. This chapter will provide a brief history of retention research and then organize the existing persistence literature into a conceptual framework that conveys the most salient student and campus factors that affect persistence. The conceptual framework organizes the research into four thematic areas related to individual student factors that affect persistence, and four thematic areas related to campus-based environmental factors that affect persistence. This conceptual framework, developed from the existing literature, serves as the scaffolding for the qualitative inquiry employed for this exploration into persistence issues for low-income students.

Brief History of Retention Research

Prior to the 1950s, there was virtually no complete system-wide, cross-institutional examination of retention issues in higher education. In the 1920s and 30s, some scholars examined institutional retention, such as J. B. Johnston at the University of Minnesota, but these studies were focused primarily on students' readiness to be academically successful in college-level work (Brothen & Wambach, 2004). In the 1950s and 1960s, more institutions and researchers attempted to understand the characteristics of dropouts, why students dropout, how to predict risk for dropout, and what could be done to prevent dropout (Berger & Lyon, 2005). Although a few scholars (Knoell, 1966; Marsh, 1966) attempted to synthesize the research that had been done on retention, Spady

(1970, 1971) was one of the first to critically analyze the previous empirical research and synthesize it into a conceptual framework that could be used to explain the underlying mechanisms involved in student departure and to improve retention rates. Based on Durkheim's sociological work on suicide, Spady developed a conceptual model of retention that incorporated students' academic and family background characteristics and connected those with grade performance, peer support, and social integration to arrive at concepts of satisfaction and institutional commitment which affect students' persistence decisions. This was groundbreaking work that examined the interaction between students' characteristics and their campus environment to explain students' persistence decisions.

Tinto's Retention Model

Based on Spady's work, Tinto (1975) expanded the conceptual model by further developing the concepts of social and academic integration and connecting them to students' goals and their institutional commitments. Tinto considered course grades to be the primary measure of academic integration, but also considered the degree to which students developed intellectually and how their choice of major and other academic pursuits meshed with the intellectual community on their campus. Tinto defined social integration as informal connections with peers, participation in extracurricular activities, and interactions with faculty and staff. Tinto asserted that the degree to which students believe that they fit in socially to campus is important, but social support with friends in subcommunities can enhance persistence even if students do not believe they fit socially with the campus as a whole. Tinto examined various student characteristics in an attempt

to determine if these characteristics would help or hinder a student's persistence. Tinto argued that these various characteristics, along with a student's initial commitment to the goal of graduation and initial commitment to the institution, would affect a student's subsequent commitments to both the institution and the goal of graduation, which would ultimately determine persistence to degree attainment. Tinto also asserted that students' experiences on campus would influence their subsequent commitments.

Tinto (1987, 1993) continued to expand and refine his model of institutional departure. Initially he believed that academic integration only affected a student's commitment to the goal of earning the degree and social integration only affected the commitment to the institution. He also initially placed students' interactions with faculty in the social sphere, but changed that to the academic sphere and determined that there was interaction among both the social and academic spheres and both played a role in students' commitments to the goal of graduation and to the institution. He defined both formal and informal areas of the academic system and the social system on campus. Students who perform adequately based on their grades (academic-formal) and benefit from interactions with campus faculty and staff (academic-informal) experience positive academic integration. Students who participate in extra-curricular activities (social-formal) and interact positively with their campus peers (social-informal) experience positive social integration. Students who experience positive academic integration and/or positive social integration increase their commitment to the goal of degree attainment and commitment to the institution which increases their likelihood of persistence. Tinto suggested that a lack of social integration may be muted by an increase in academic

integration or vice versa. He also suggested that a lack of commitment to an institution can be muted by an increase in the commitment to the goal of degree attainment or vice versa.

Tinto (1987, 1993) expanded the application of Durkheim's theory of suicide and Van Gennep's concept of rites of passage in his theory of retention. His basic premise was that in order for students to be successful and persist in college, they need to exit their previous culture and transition into and embrace their new college culture of the institution. Tinto argued that students must separate from the communities of their past, successfully transition from their previous norms to the new norms of college, and incorporate the new culture of the institution into their lives until they are fully socially and academically integrated.

Critique of Tinto

Since 1975, much of the retention research either builds upon or at least refers to the work done by Tinto. Braxton (1999) claims that "Tinto's interactionalist theory possesses near paradigmatic stature in the study of college student departure" (p. 93) based on the thousands of citations and hundreds of dissertations that reference this work. Even with its lofty status in the field, Tinto's retention theory and model has come under fire from numerous critics charging that the theory lacks empirical support, has poorly defined terms that are difficult to measure, contains constructs that lack internal validity, and is only appropriate for certain types of students. When Braxton, Sullivan, and Johnson (1997) evaluated the previous research done on Tinto's theory, they found that only four of the thirteen propositions in the theory had strong empirical support with

multi-institutional studies and only five of the thirteen propositions had strong empirical support with single-institutional studies. Based on these findings, they asserted that while there is some empirical support for Tinto's theory, it lacks internal consistency.

Tierney (1992) was one of the first to critique Tinto's model for being inappropriate for students of color. He took issue with Tinto and other researchers who relied too heavily on an assimilation model for successful retention and persistence. Tinto's model suggests that these students of color must give up their previous cultures and connections to their families and communities of color, abandoning their cultural heritage and practices, in order to adopt the predominately White culture of these institutions. Tierney calls for a model of retention that would incorporate and value diversity and allow for mutual transformation on behalf of students and the institution as they become increasingly diverse.

Three decades after his initial work, Tinto (2006) acknowledged some of the criticism and the need to consider students from diverse backgrounds and the wide array of contextual influences that affect student retention. Hurtado, Milem, Clayton-Pedersen, and Allen (1998) have called for new retention models that address the changing demographics at many institutions and are more suited to accommodating the differing needs of diverse students. Rendón, Jalomo, and Nora (2000) also have called for revisionist models and theory refinements since Tinto's model and other assimilation models encourage students of color to deny their cultural heritage and the models do not adequately describe what is occurring on an individual level when students of color choose not to persist.

Contributions from Astin and Bean

Even with the criticisms, Tinto's retention work should be noted for the degree that it has moved retention research forward. Not only have the critics put forth their own theories and models, many researchers have taken and explored particular elements in the theory or tested particular factors that Tinto has suggested help or hinder persistence. Running parallel with Tinto's retention work, the student development work of Astin (1977, 1993b) should also be recognized for its significance, longevity, and ultimate impact on continuing research around issues of student success and persistence. Astin's (1993b) input-environment-outcome (I-E-O) model mirrors much of the conceptual framework that Tinto had been using. Astin examined the inputs (student characteristics upon matriculation) and how those inputs interacted with various environments (campus programs, policies, peer interactions, and other educational experiences) to determine outcomes (students' level of development and success after exposure to a specific environment). He primarily focused on analyzing various campus environments/elements and their impact on students. Thus, he examined retention more from an institutional model that places responsibility more heavily on the institution for creating positive student environmental conditions than Tinto's focus on an individual's fit within a particular environment.

Bean (1985) also was very influential on retention research at this time by also examining institutional fit. He took both a psychological and organizational perspective to illuminate student departure. Bean argued that students' experiences on campus will shape their beliefs and attitudes about their fit with an institution. Based on their

evaluation of their sense of belonging, students form intentions to stay or leave and these intentions frequently manifest in the behavior of persisting or withdrawing.

More recently, Astin has used his work to create elaborate formulas utilizing high school grades, ACT/SAT scores, and information from the CIRP (Cooperative Institutional Research Program) to predict what an institution's graduation rate should be based on the characteristics of their incoming class (Astin & Osguera, 2005). Utilizing such data can help researchers examine underperforming and overperforming institutions when it comes to their degree attainment rates. Although such work provides clues as to what factors help and hinder persistence, it still does not explain on an individual level *why* a particular student under similar circumstances (characteristics and environment) chooses to persist while another does not. If institutions had a better understanding of the *why* as well as the *how* students make persistence decisions, they may be able to provide greater assistance to students and allow them to persist until graduation.

Tinto, Astin, and Bean help to create a foundation for retention research from which other scholars have been able to build upon, criticize, and create their own research around issues of persistence. From this foundation, a voluminous amount of scholarly work has been produced, yet persistence issues remain a serious problem in higher education. I believe that there is no magic bullet to solving the issue of retention and increasing persistence and baccalaureate degree attainment rates. I think the issues are complex, multi-faceted, and may have a great deal of variability from one student to the next. Therefore, I wanted to create a conceptual model of persistence that synthesizes the research on the most important factors that affect persistence decisions and organizes the

research into a model that is easy to comprehend while still capturing the complexity of the interlocking multifaceted factors that govern a student's decision to persist. My model intentionally incorporates the work of various retention models and perspectives and should be appropriate for diverse demographics of students.

Role of Other Frameworks in Examining Persistence

In order to develop a conceptual model that accurately reflects the complex, multifaceted factors that affect students' persistence, I needed to examine frameworks outside of the persistence literature. Feminist scholars have been at the forefront of examining intersectionality, the consideration of the multiple and simultaneous factors of a subject's identity and social situation. Although this study does not apply strict analysis based on intersectionality, my conceptual model utilizes some theoretical underpinnings from feminist scholars, such as Patricia Hill Collins' (1986) work on the interlocking systems of oppression and Marilyn Frye's (1983) use of the birdcage analogy to represent a matrix of domination, to demonstrate appreciation for the multifaceted factors that overlap and interact as students make their individual decisions to persist. Frye (1983) argues that systems of oppression operate much like a birdcage to maintain the status quo and keep certain groups from attaining higher status. If people examine just one wire of a birdcage, they would not understand why the bird does not simply fly around that particular wire. However, if they see the entire interlocking system of barriers, they understand how it is nearly impossible for the bird to escape the confines of where the system has positioned it. Similarly, higher education administrators or policymakers may view students on college campuses with various demographic or other risk-factors for

departure through various single-focus lenses. As a result, they may not understand why simply giving a low-income student a full-ride scholarship does not remove all barriers to degree attainment for that student. Until they truly understand the systemically connected hurdles that decrease low-income students' chances of persistence, they will not fully appreciate the interlocking nature of the various issues and areas that affect persistence. Examining college persistence issues along a matrix of student risk factors, as well as campus support structures, allows for a more nuanced understanding of the interplay among various factors and how some intersecting factors can exacerbate potential risk areas, while others may diminish risk of departure for some students.

Much of the previous retention research focused too narrowly on one or two variables and failed to consider the complexity of interactions among various student characteristics and how those interact with various campus characteristics. As I reviewed the extensive literature on retention and persistence and considered my practitioner knowledge in the field, as well as other models and frameworks previously created, I discovered the most salient themes and a way to organize the themes that would capture the interaction among variables in various theme areas. This newly structured framework of the literature is easy to understand and yet illuminates the complexity of the persistence problem in a concise manner. The Persistence Pyramid is a conceptual framework that captures the current literature, theories, models, and research, while reflecting those intersections among the multifaceted factors that affect persistence.

Conceptual Framework: The Persistence Pyramid

The Persistence Pyramid is a holistic model of persistence from matriculation to the point of degree attainment. This model encapsulates the most salient research on persistence and incorporates it into a conceptual framework that can be applied appropriately to a variety of demographic groups and institutions. This model explores the interaction between student factors (who students are, what they bring to campus, and what they do while enrolled) and campus factors (the environment and opportunities created by the institution).

The student factors are divided into four categories that create the four vertical edges of the pyramid (see Figure 1 on page 20) that run from the base of the pyramid, when they start college, to the apex, when they graduate. The four student factor categories are academic, economic, social, and psychological. These factors remain with the student with varying degrees of saliency throughout their time in college.

The campus factors are divided into the four sides of the pyramid that combine to create the overall level of support for students (see Figure 2 on page 21). The four campus factors are educational and curricular support, support for diversity and community, involvement opportunities, and a caring culture. Support for students is ultimately the core of the pyramid and creates the base and foundation of the pyramid upon which student success can be built and ultimately degree attainment can occur. As students start out, they need more support and institutions need to provide more opportunities along the faces of the pyramid to ensure that students get the support that

Persistence Pyramid
Student Factors
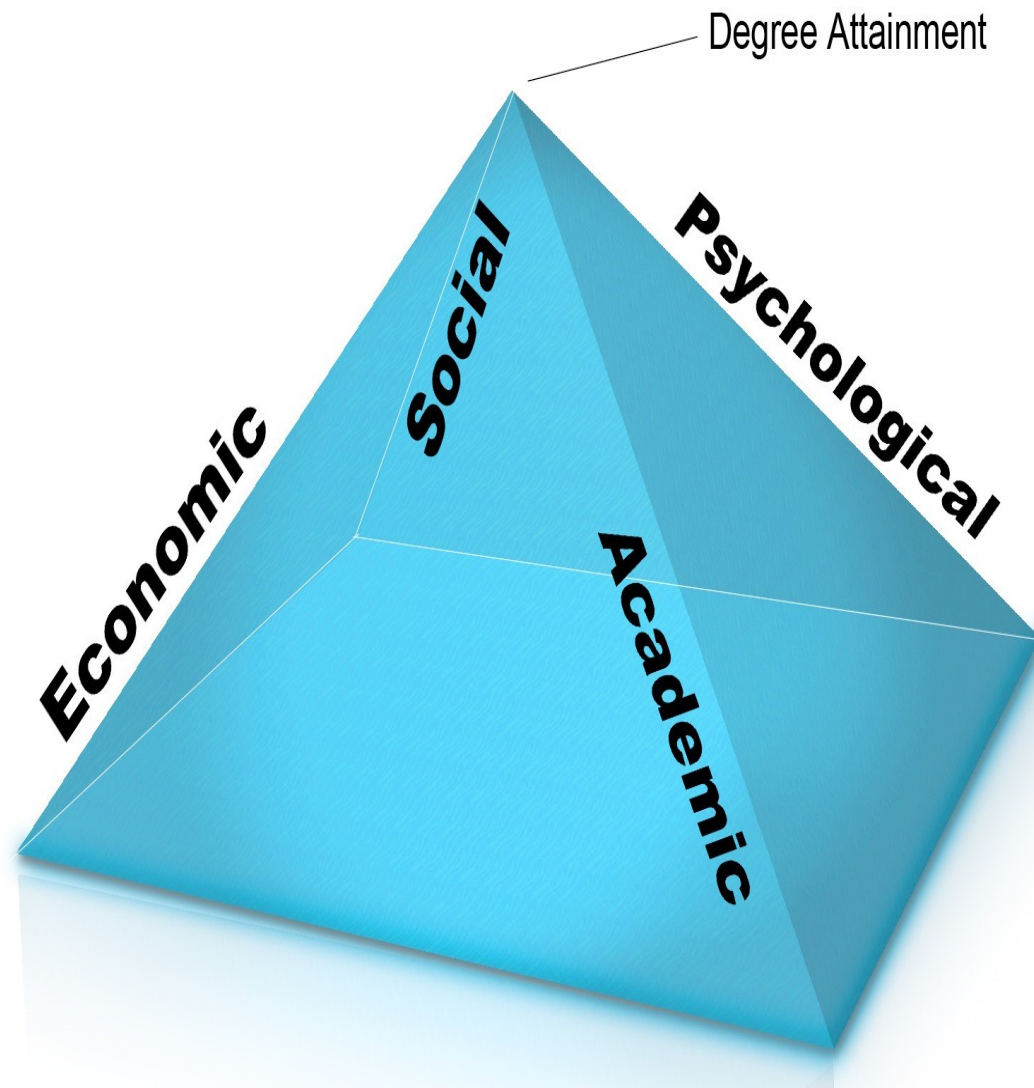
Figure 1. Student Factors of the Persistence Pyramid

Persistence Pyramid
Campus Factors
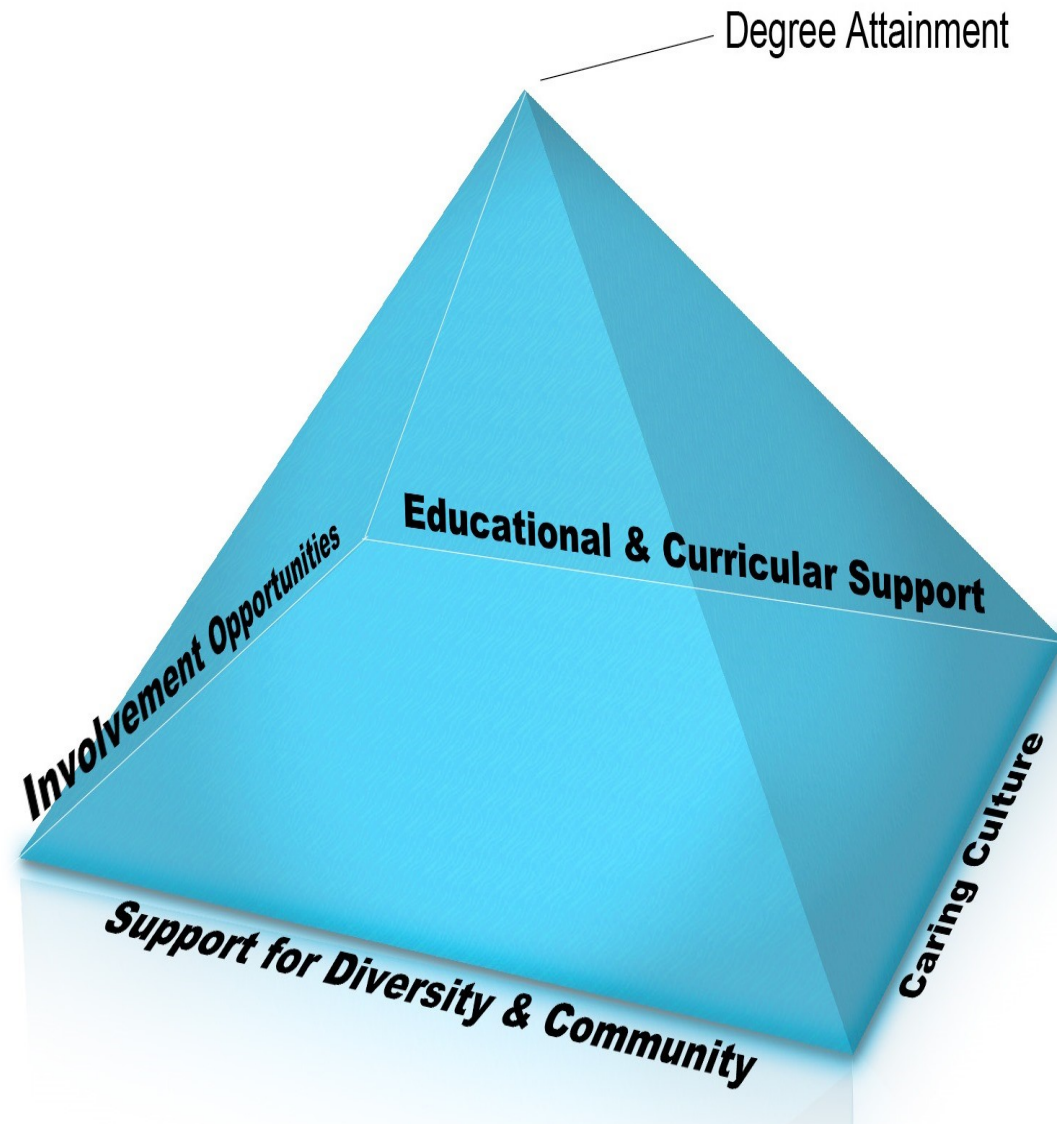
Figure 2. Campus Factors of the Persistence Pyramid

they need to address their individual student characteristics and risk factors (Cuseo, 2003; Levitz, Noel, & Richter, 1999). As they get closer to the apex of degree attainment, students will need less campus support to complete their degree, but their characteristics remain with them throughout and they always need some level of campus support.

Student Factors

Students begin college with a variety of demographic and other individual student characteristics that remain with them throughout their college years and inevitably affect their educational experience and their persistence. In addition, there are various things that college students do and believe while in school, such as behaviors, attitudes, habits, and activities, which affect their educational experience and their persistence. These student factors can be grouped into four general areas: (a) *academic*, which includes students' pre-college preparation and ongoing college grades; (b) *economic,* which includes students' SES, cultural capital, and access to financial aid; (c) *social,* which includes students' interactions with faculty, staff, and peers and support from family; and (d) *psychological,* which includes goal orientation, self-efficacy, and other attitudes toward college and learning.

Academic.

Academic student factors that influence persistence include pre-college characteristics such as high school GPA, ACT/SAT scores, and rigorous high school curriculum including adequate math and writing competence. On-going adequate academic performance in college, including GPA and number of withdrawals, also

impacts likelihood of persistence. Some of Tinto's concepts related to academic integration also fall into this category, such as choosing an appropriate major that is the right fit for the student and the institution in which the student is currently enrolled.

Pre-college preparation.

Some of the earliest retention research noted the influence of pre-college characteristics on persistence (Tinto, 1975). Adelman (1999, 2006) has been at the forefront of arguing for the necessity of adequate preparation leading to adequate academic success which leads to persistence and graduation. His quantitative analysis of tracking students has led to a greater understanding of the magnitude of particular characteristics and the impact of the pre-college curriculum on degree attainment. Adelman was one of the first to argue in favor of examining system-wide departure from higher education versus only considering institutional departure, since so many students attend more than one institution. He also has studied students' particular enrollment behaviors while in college and their effect on completion rates. Adelman has found that "the highest level of mathematics one studies in secondary school has the strongest continuing influence on bachelor's degree completion. Finishing a course beyond the level of Algebra 2 (for example, trigonometry or pre-calculus) more than doubles the odds that a student who enters postsecondary education will complete a bachelor's degree" (1999, pp. 16-18).

Bowen, Kurzweil, and Tobin (2005) also asserted that being academically under-prepared is the primary reason for lack of degree attainment. Approximately two-thirds of Hispanic high school graduates and approximately four-fifths of African-American high

school graduates do not have the skills to read at a college level. This lack of preparation

typically translates to a lack of academic success in college which greatly decreases

persistence. Bowen, Chingos, and McPherson (2009) discovered that high school GPA is

a significantly better predictor of degree attainment than ACT/SAT standardized test

scores. At less-selective public universities, a one standard-deviation increase in high

school GPA nets a ten percentage point increase in the six-year graduation rate compared

to only a two percentage point increase based on one standard-deviation increase in test

scores. The work of Adelman (1999), Astin and Oseguera (2005), and Pascarella and

Terenzini (2005) demonstrated how pre-college characteristics and early success in

academic performance play primary roles in retention and graduation rates for all

students. Adequate academic preparation, or lack thereof, may be especially pronounced

for low-income students who are more likely to attend schools that are less academically-

intense, offering fewer choices in advanced math, English, and other college-prep areas,

which also increases the likelihood that those students will not persist (Ishitani, 2006).

College academic success and integration.

To increase their chances of persisting until graduation, students not only need

appropriate academic preparation, they also need to continue to experience academic

success while attending college. Adelman (1999) found that successfully completing all

attempted credits in the first year, along with high first-year GPA, was positively

correlated with persistence. He also observed that continuous enrollment, positive trends

in GPA, and a lack of Ds, Fs, Withdraws, and Incompletes, were positive indicators of

degree completion. Pascarella and Terenzini (2005) asserted that college grades are the

best predictor of student persistence and degree completion. For those students who are academically under-prepared, several studies have demonstrated the effectiveness of taking developmental courses and the corresponding improvements in retention and graduation rates compared to similar students who did not take the developmental courses (Kuh et al., 2007).

Tinto (1987, 1993) also stressed the importance of academic integration to increase persistence. He included items such as interaction with faculty and having a major that is aligned with the values of the campus. Tinto encouraged students to participate in those academic activities that will spur their intellectual development. He encouraged faculty to think of the classroom as a learning community in which students become connected to the academic milieu of the institution. Tinto argued that the more those students become engaged in the learning, the more likely they are to persist to graduation.

To increase persistence, students need to be connected to the academic mission of the institution and have the background and support to succeed academically. Developmental coursework, tutoring, supplemental instruction, and effective advising on appropriate courses and appropriate course loads can combine to provide under-prepared students and students who are struggling academically the necessary academic tools required to achieve degree attainment. Enough evidence supports the need for adequate academic preparation and adequate academic success while in college that it should be incorporated into any holistic theory of student retention.

Economic.

The economic student factors that affect persistence start with the basics of each student's finances, including a student's personal and family's financial situation and their ability to pay for college and associated costs. However, there are many related factors that closely align with socio-economic status (SES) that impact retention, such as those factors that align with Bourdieu's (1986) concept of cultural capital. Bourdieu (1986) defined cultural capital as the knowledge, skills, habits, and dispositions that may confer power, status, or success that are typically passed from parent to child. He utilized the concept to explain the consistently higher rates of educational success for students from upper-class backgrounds, beyond what can be explained by financial assets. As a result, I am including risk factors such as being a first-generation college student in the economic category, since the resulting lack of cultural capital puts those students' persistence at risk. One's income level or SES, typically measured as family income level or SES, is one of the strongest predictors of bachelor's degree attainment. As noted earlier, being low-income significantly reduces a student's chance of reaching degree attainment. Everything from types and amount of financial aid, numbers of hours needed for paid employment, family obligations, ability to live on campus, ability to buy books, and knowledge of various elements of college cultural capital play a significant role in determining a student's chances of graduation.

The role of SES.

Astin (1993a) discovered that even after controlling for academic ability, the best predictor of earning a bachelor's degree is a student's socioeconomic status. The

differences in persistence for low-income students compared to middle- and higher-income students can be especially dramatic. As noted earlier, "only 36 percent of college-qualified low-income students complete bachelor's degrees within eight and a half years, compared with 81 percent of high-income students" (U.S. Department of Education, 2006, p. 9). Even for those who start at four-year colleges with the intention of earning a B.A., only 54% of those students with family incomes below $25,000 who started in 1995-96 completed their degree in six years compared to 77% who had family incomes over $70,000 (Baum & Payea, 2004). The educational path that most low-income students take to earn a bachelor's degree can also exacerbate their low degree attainment rates. Cabrera, Burkum, and La Nasa (2005) found that the lowest-SES students are most likely to have medium preparation in high school with medium academic resources and start at a two-year college. Following this path, their chance of a bachelor's degree is only 3.3% compared to the highest-SES students who are most likely to start with high academic resources and preparation and begin at a four-year school which ends with a bachelor's degree 81% of the time. In almost all the pathways to bachelor's degree attainment, those students with the highest-SES are significantly more likely to earn a bachelor's degree than students from the lowest-SES (Cabrera, Burkum, & La Nasa, 2005). Bowen, Chingos, and McPherson (2009) studied public universities and found that even after controlling for ability and other pre-college characteristics, much of the gap in graduation rates remained between the top income quartile and the bottom income quartile.

McPherson and Schapiro (1998) have demonstrated that low-income families are very sensitive to price increases; for every $150 net cost increase in 1993-94 dollars there is a 1.8% drop in enrollment. Mumper (2003) has also shown that as the price of college increases, participation for low-income students decreases. Eighty-seven percent of low-income students have unmet financial need of about $5,000, which is almost three times their expected family contribution (Kuh et al., 2007). Research by St. John (2002) and Mumper (2003) illustrate the need for financial assistance to play a role in any model of college student retention since several studies have concluded that financial aid recipients persist at a greater rate than non-recipients.

The role of financial aid.

Tuition and other costs associated with college have increased significantly since the 1970s and the burden on low-income students and their families is especially pronounced (Mumper, 2003). In the 1970s low-income families paid 42% of their income in order for a child to attend college and by 2000 that number was close to 60% (Haveman & Smeeding, 2006). In 1999-2000, 64% of a low-income student's costs were covered by financial aid, but only 39% of that was in the form of grants (Dur, Teulings, & Van Rens, 2004). For low-income students, students of color, and first-generation college students, financial aid in the form of grants and scholarships has been shown to be particularly helpful in increasing graduation and retention rates since many of these students are particularity price-sensitive and may come from families who are especially adverse to loans (St. John, 2002; St. John, Paulsen, & Carter, 2005). For low-income students, higher graduation and retention rates are associated with types of aid that do not

need to be repaid, such as grants, scholarships, and work-study, compared to those types

that do, such as loans (St. John, 2002). Ishitani (2006) found that students who get grants

or work-study jobs were 37 to 41% less likely to drop out their first year compared to

students who did not receive any aid. Low-income students are more likely to respond

positively to increases in grant amount than in loan amounts when making persistence

decisions (Saunders & Schuh, 2004). One study demonstrated that need-based grants do

more than non-need-based grants in securing enrollment and thus, low-income student

are likely to receive greater benefits from financial aid than their higher income peers

(Saunders & Schuh, 2004). Walpole (2003) illustrates a well-defined link between lack of

financial aid and the reduction in access, persistence, and graduation for low-income

students.

In addition, grants improve persistence as well as social integration and grade

point averages (Saunders & Schuh, 2004). Enough overall financial aid can positively

influence academic and social experiences and thus, increase the likelihood of persistence

(Cabrera, Nora, & Castaneda, 1993). Not enough financial aid, however, especially in

non-repayment forms, can also affect low-income students' ability to be academically

successful. Students who have unmet financial need and/or increasing potential debt

burdens are more susceptible to academic failure than those with better funding (Hearn,

2006).

These financial hardships cause low-income students to make a variety of

decisions, such as working more hours or living at home, that have negative implications

for persistence. As a result, 65% of low-income students work while in school, with over

30% of them working more than 35 hours per week; such workloads have been shown to dramatically decrease persistence and degree completion (Fitzgerald, 2004). St. John (2002) has shown that financial considerations are likely to take precedence over social or academic experiences in persistence decisions. Low-income students' lack of understanding of financial aid is often connected to breaks in their enrollment and other behavioral decisions that do not lead to persistence. Fewer low-income students seem to understand the long-term economic benefits of higher education as well as the financial costs of taking time off to work or going part-time rather than continuing enrollment. This lack of understanding of financial aid can have a cyclical effect if students do not understand how their part-time enrollment and greater employment income can reduce their financial aid awards and lead to decreases in academic gain while in school (Goldrick-Rab, 2006). Low-income students are less likely to get adequate financial aid counseling even once enrolled and thus, these financial aid changes are more likely to affect them negatively. They are less likely to have the appropriate understanding of the connection between such effects and their behavioral decisions (Goldrick-Rab, 2006).

Low-income students are more sensitive to tuition increases and are more likely to reevaluate their decision to persist each semester and each year, keeping in mind that overall cost of attendance (tuition, fees, books, transportation, housing, food) is far greater than what these students can afford. They will make this assessment based on their initial financial expectations in comparison to the lived reality of their costs of attending school and their estimate of their future projected earnings (Paulsen & St John, 2002). Therefore, if institutions switch from grants to more loans for these students mid-

way through their college career, the students are likely to perceive that the implicit

contract between them and the institution has been broken and that they are under no

obligation to remain enrolled (Paulsen & St John, 2002). In addition, St. John (2002) has

shown that tuition increases are more likely to decrease persistence in low-income

students than in higher income students.

Related costs for low-income students.

Unfortunately, finances and SES again play a cyclical negative role here as low-

income students tend to work more hours and thus have less time to devote to study and

school-related activities. This decreases their social interaction and GPA, two of the other

primary factors in persistence. Yet, if students can receive adequate financial aid, they are

less likely to make such choices that may endanger their progress toward degree

completion, and thus, are less likely to stop-out from school (Goldrick-Rab, 2006).

Student perception of their ability to pay tends to shape both their academic and social

experiences of campus (St. John, 2002). Financial aid can positively affect students'

perception and satisfaction with their campus social integration, which in turn increases

their persistence (Braunstein, McGrath, & Pescatrice, 1999).

Being low-income is also connected to various other factors that affect the chance

of degree attainment. Many low-income students attended a less academically-intense

high school, which also increases the likelihood that those students will not persist

(Ishitani, 2006). For low-income students who have difficulty meeting the "unmet need"

portion of their education costs after financial aid is used, they will experience hardships

that are not present for most middle- and upper-income students (Lee, 2002). For

example, low-income students are less likely to live on campus and more likely to live at home in order to save money, but these decisions decrease persistence because there is less social interaction and connection to campus. Students who work and live on campus are more likely to persist than those who work an equal number of hours but live off campus (Lee, 2002).

In addition, class issues also affect the amount of loans and debt certain students will incur, only 44% of high-income students graduate with debt compared to 71% of low-income students (Fitzgerald, 2004). This is especially troubling for low-income students who borrow at much higher rates (Fitzgerald, 2004). Although cost will not be prohibitive for all low-income students, it is a significant factor for many of them and their loan debt will be incredibly burdensome if they do not persist all the way to degree completion (Price, 2004).

Social.

The social student factors that affect persistence align closely with Tinto's concept of social integration. Social factors include interaction with peers, connections with faculty and staff, family support of the student's degree ambitions, close friendships, and a sense of belonging.

Astin (1993b) asserts that peers are the strongest influence on growth and development for undergraduate students. He demonstrated that numerous social activities, such as class projects, participation in student government, Greek life, intramural sports, course-content discussions, student clubs, and socialization with peers, have positive educational benefits for students. Pascerella and Terenzini (2005) found

that this influence from peers led to increased persistence. They also noted that

interactions with faculty members and support from family aided in social support and

increased persistence, but the influence was not as strong as that from peer influence. For

some students of color at Predominantly White Institutions (PWIs), social support may

come significantly from family support rather than from friends on campus (Kenny &

Stryker, 1996). However, the degree to which social integration is impacted by general

peer support compared to peer support from the student's self-identified ethnic group can

vary dramatically based on the racial and ethnic demographics on a particular campus

(Schneider & Ward, 2003).

When students have positive interactions with their peers and feel like they "fit"

with their campus, they are more likely to persist (Lotkowski, Robbins, & Noeth, 2004).

Peer mentoring programs can increase persistence by creating a connection with another

student and learning about campus resources. Peer teaching and peer tutoring are also

helpful in getting students to effectively engage in the material and with each other (Kuh

et al., 2007). This interaction increases their social integration and makes them feel

connected to both the institution and their peers (Tinto, 1993).

Other forms of mentoring (faculty, advisers, alumni) can also increase persistence

and are especially important for students of color (Tinto, 1993). Faculty mentoring can

increase persistence for African American students at both Historically Black Colleges

and Universities (HBCUs) and PWIs (Himelhoch, Nichols, Ball, & Black, 1997). For

low-income students, formal mentoring programs can increase retention because these

students can feel an obligation to their mentor to remain enrolled in college (Wallace, Abel, & Ropers-Huilman, 2000).

Persistence is increased when students feel like they have many close friends on campus and the campus maintains good cohesion among peers (Kuh et al., 2007). Kuh et al. (2007) suggested that students' relationships with their social network of friends, faculty, staff, family, and campus peers have a significant influence on their satisfaction and persistence. Support from peers is an important factor in maintaining enrollment, but for students who do not fit socially on a campus, they can supplement that peer support with faculty support and increase their likelihood of persistence. If students do not share the same values and norms as the majority of campus, they may not find that social support among peers or faculty and thus, decrease their chances of persistence (Berger & Milem, 1999). This might explain why living on campus has been shown to increase the likelihood of persistence even when other factors are controlled, such as SES and academic preparation (Schudde, 2011). Students who work and live on campus are more likely to persist than those who work an equal number of hours but live off campus (Lee, 2002).

One of the reasons why work-study has been linked to persistence may be connected to this notion of living and working on campus and that it requires students to become involved on campus (Tinto & Pusser, 2006). Campus engagement was one of the primary factors that Tinto (1987) originally found was linked to persistence and has since been supported by many subsequent studies (Tinto & Pusser, 2006). Work-study is shown to increase persistence versus outside work which is likely to decrease persistence

(Pascarella & Terenzini, 2005). It is that connection to campus and the social interaction that likely occurs which propels work-study to be a benefit to persistence.

Kuh, Kinzie, Schuh, and Whitt (2005) noted the importance of socializing students together so they feel bonded to each other which will increase their persistence and satisfaction with their educational experience. They recommended the use of rituals and traditions for creating experiences that will connect students with each other, create a sense of belonging, and make them feel attached to campus. As these relationships with each other develop, students are socialized to pass on the institutional values and traditions which can also convey the need for basic academic achievement and the need to attain the degree. Tinto (1987) asserted that this social integration is vital to retention efforts and it occurs in both formal settings, such as a working on the student newspaper or being involved in an official student organization, as well as informal settings, such as study groups or residence hall conversations with peers.

Psychological.

The psychological student factors that affect persistence include sense of purpose, goal orientation, degree aspirations, self-efficacy, motivation, locus of control, college expectations, student satisfaction with their college experience, and students' sense of their institution fulfilling its implied "contract" with them. Kuh et al. asserted that "students' impressions of institutional quality, their willingness to attend the institution again, and overall satisfaction are precursors of educational attainment" (2007, p. 8).

Bean (2005) has linked various psychological concepts and student dispositions to persistence. Self-efficacy theory suggests that students who believe that they can succeed

academically and adapt to campus expectations will perform in such a way to reach their goals. Achieving those goals along with feedback about such accomplishments will increase a student's self-confidence in a cyclical manner that increases educational aspirations and self-efficacy, all of which increases the probability of persistence. Bean (2005) also suggested that self-efficacy theory can be applied to social settings as well. Students who have positive interactions with faculty and staff will have positive attitudes toward their education; this increase in self-efficacy will increase persistence.

Bean (2005) included the concepts of approach and avoidance within coping theory to suggest that students who approach positive behaviors and avoid negative behaviors to reduce environmental stress are more likely to persist. Students who have an internal locus of control believe that their behavior determines outcomes, they are actors upon their world rather than feeling acted upon. Therefore, when they perform well academically, they attribute that to their efforts and good study habits rather than instructors' opinions about the student. This internal locus of control reinforces positive behaviors which increase self-confidence and self-efficacy, which increases persistence. Bean and Eaton (2000) asserted that students enter college with these various psychological predispositions which are modified or reinforced based on interactions with the camps environment. If this iterative process results in positive attitudes and positive outcomes, then students' motivation will increase along with their likelihood of persisting. Students who maintain an incremental view compared to an entity view towards their own intelligence believe that intelligence is not fixed and it can be expanded through knowledge and skill acquisition (Bean & Eaton, 2000). As a result,

they engage in those educationally purposeful activities that are likely to increase both

intelligence and chances of degree attainment. This learning and reinforcement of

behavior supports their self-efficacy. Students start college with certain expectations

about college life and expectations about their interactions with faculty, staff, and peers.

If those expectations are reasonably fulfilled in a positive manner, then their social and

academic integration will progress (Kuh et al., 2007). However, if negative interactions

with faculty, staff, and/or peers violates students' internal psychological contract with the

institution, they are more likely to leave.

For Chickering and Reisser (1993), their sixth of seven vectors of student

development, *developing purpose*, illustrates a critical area of development that is

essential to degree attainment for most students. Students must be able to assess their

interests and options in order to develop a plan that will result in the aspirational life that

they have envisioned for themselves. This developed intentionality will allow them to

continue to make and modify short-term and long-term goals and engage in the activities

required to achieve those goals. As students' goals and vocational plans increase in

clarity, they are increasingly likely to participate in appropriate study habits and

involvement opportunities that will engage them in their campus and their choice of

major (Chickering & Reisser, 1993). These activities have been shown to increase

persistence (Kuh et al., 2007). Bean (2005) also found that students who believe that their

education will result in employment are more likely to be motivated to engage in

behaviors that result in academic success and ultimately degree attainment. However, if

students are not able to develop a sense of purpose, their risk of withdrawal increases

because students who continue to lack major or career direction are less likely to persist

to degree attainment (Astin, 1993b; Cuseo, 2003).

Bean and Eaton (2001) took these various psychological theories one step further

and attempted to apply them directly to Tinto's concepts of academic integration and

social integration. They asserted that the psychological processes that result in positive

gains in self-efficacy, developing an internal locus of control, developing coping

behaviors that approach rather than avoid social and academic activities, and positive

attitudes about college and institutional attendance, will result in increases in academic

integration and social integration. Bean and Eaton (2001) described the psychological

process that occurs with various educational programs. They explored each type of

program separately, including service-learning, freshman interest groups, learning

communities, freshman seminars, and mentoring programs. They explained how each one

can increase academic and social integration and thus, improve retention.

Campus Factors

Campus factors (see Figure 2 on page 21) are the four sides of the Persistence

Pyramid that combine to create the overall level of support for students. Tinto (2006)

implored institutions to stop focusing on the "problems" with the students and start

focusing on creating environments that will increase student persistence. Support for

students is ultimately the core of the pyramid and creates the base and foundation of the

pyramid upon which student success and achievement can be built and ultimately

baccalaureate degree attainment can occur. These campus factors can be grouped into

four general categories: (a) *educational and curricular support*, which includes such

things as tutoring, advising, and learning communities; (b) *support for diversity and community,* which means creating a sense of belonging and community for all campus members, especially for students who are more likely to feel disenfranchised from higher education, such as low-income students, first-generation students, and students of color; (c) *involvement opportunities,* which includes student organizations, undergraduate research, work-study, and campus activities; and (d) *a caring culture,* which means creating a students-first mentality that places a high priority on undergraduate education and permeates every facet of the institution.

These factors of campus support start at the base of the pyramid when students begin college and they require the most support. Students will continue to need some level of campus support until they have reached the apex of graduation. Statistically, students are more likely to drop-out during their first year than any other time in college (Cuseo, 2003). Therefore, many institutions focus on programs and advising that will target the freshman year. Levitz, Noel, and Richter (1999) claimed that for most institutions attrition rates are reduced by half each subsequent year through about the fifth year. So if an institution loses about twenty percent of their incoming first-year students in the first year, that institution will lose about ten percent of that cohort in the second year and five percent in the third year. In order to increase persistence, they recommended a variety of interventions that are supported by the campus factors listed as the base of the pyramid, such as getting students connected to engagement opportunities, getting them connected to faculty, and advisers employing frequent intensive and

intrusive contact with students to watch for problems and ensure that students are utilizing campus resources (Levitz, Noel, & Richter, 1999).

Educational and curricular support.

The campus factors of educational and curricular support that affect persistence include all forms of academic support such as tutoring, study skills, and supplemental instruction along with various programs such as first-year seminars, major and career exploration courses, advising, summer bridge programs, living and learning communities, connections with faculty, and attention to learning in the classroom and forms of teaching. Tinto (2004) urged institutions to provide easy access to academic, social, and personal support services to all students to increase retention and graduation rates. As noted earlier, Pascerella and Terenzini (2005) and Adelman (1999) argued that college grades, especially first-year GPA, are one of the most significant predictors of degree attainment. Thus, it is vital for institutions to provide educational support to their students that will improve the likelihood of positive grade performance as well as persistence.

Course- and program-based support.

For students who are academically under-prepared, several studies have demonstrated the effectiveness of taking developmental courses and the corresponding improvements in retention and graduation rates compared to similar students who did not take the developmental courses (Kuh et al., 2007). Pascerella and Terenzini (2005) examined numerous studies that support the use of developmental programs to overcome a lack of adequate pre-college academic preparation and increase the likelihood of persistence. Utilizing supplemental instruction in challenging courses has also been

demonstrated to improve degree completion rates. Pascarella and Terenzini (2005)

examined numerous studies that showed participation in first-year seminars, both

discipline-based academic seminars and more developmental study skills-based seminars,

increased persistence and improved GPA and academic and social integration. Starke,

Harth, and Sirianni (2001) examined eight cohorts of first-year students at a public four-

year liberal arts college and found that students who enrolled in a first-year orientation

course had significantly better degree attainment rates compared to students who did not

take the course. They also had improvements in various areas related to persistence

including better GPAs, better interaction with faculty, greater participation in extra-

curricular activities, and greater satisfaction with their college experience. The seminar

participants were more familiar with and more likely to utilize campus resources,

including library resources, and they saw gains in academic skills, such as study habits

and research skills, as well as stress management.

Creating learning communities in which students take a set of courses together

and participate in activities connecting the courses and each other has been demonstrated

to increase persistence (Engstrom & Tinto, 2007). When these communities include a

residential component (living-learning communities), the socialization factor along with

study groups and possibly in-house tutoring services, can significantly enhance retention.

Such communities are especially helpful for first-generation students who can create a

sense of belonging within these structured interactions with faculty and peers and

increase both their social and academic integration (Jehangir, 2010). Hossler, Kuh, and

Olsen (2001) demonstrated that integrating social and academic experiences and bringing

those opportunities along with tutoring and advising services directly to students, such as in their residence halls, increased persistence.

Tinto (1997) urged faculty and higher education researchers to consider the possibility of each classroom serving as a learning community. He argued that engaging the students in active and involved learning would increase their academic and social integration and lead to increased persistence. Braxton, Milem, and Sullivan (2000) also found that the pedagogical practices of faculty impacted students' persistence. They found that students were more likely to be retained if instructors included more active learning methods in their classes.

Service-based support.

Summer bridge programs, advising, personal counseling, and undergraduate research programs have all been shown to have positive effects on persistence (Pascarella & Terenzini, 2005). Student support services (SSS) as part of the federal TRIO programs, which offers student support in study skills, tutoring, mentoring, and academic and career counseling, has been shown to increase persistence (Kuh et al., 2007). Study skills courses and supplemental instruction courses have also shown increases in persistence (Kuh et al., 2007).

Bean and Eaton (2001) also suggest such forms of educational support enhance persistence. As noted earlier, they examined service-learning programs, freshman interest groups, learning communities, freshman seminars, and mentoring programs. They asserted that these programs will lead to various gains in self-efficacy, internal locus of

control, positive coping behaviors, and positive attitudes about college which will lead to gains in academic and social integration and increase the chances for degree attainment.

Encouraging students to take advantage of the various services and programs offered to students is also a vital element in any persistence program. Smith (2005) discovered that students who were more receptive to using college services to help them academically and socially were more likely to be retained. He suggested that students identified as having low-receptivity should be considered another at-risk group and advisers and other personnel should target student referrals to various services in relation to information identified in surveys such as the College Student Inventory (Smith, 2005).

Tinto (2004) argued that advising is an essential element of any comprehensive retention effort, especially for low-income students. He suggested that low-income students are in particular need of advising assistance in two areas. Students who are undecided or change their major or career plans during college need advising assistance to develop a clear plan to reach their goals. First-generation students need advising assistance to substitute for the knowledge, understanding, and support for navigating complex higher education institutions that might otherwise be provided by parents who have previously attended college. Extensive orientation and advising programs have been found to increase graduation rates (Kuh et al., 2007).

Mid-term alert or similar early warning systems that notify students and their advisers about academic difficulties in courses have been shown to help with persistence and degree completion (Kuh et al., 2007). These warning systems are especially important for students who enter college with certain risk factors such as being first-

generation, attending part-time, working more than 30 hours per week, being a single parent, or being under-prepared academically for college. Campuses that address students' early academic difficulties with faculty support, tutoring services, advising, and peer support are most likely to see improved success with these students (Kuh et al., 2007). Advising, tutoring, and supplemental instruction can combine to provide under-prepared students the necessary academic success required to increase persistence to degree attainment.

Support for diversity and community.

A significant campus factor which can be utilized to increase retention and persistence is support for diversity and community. Campuses need to create a sense of belonging and a connection to campus for all students and groups within campus. This commitment to creating a sense of community for all students on campus should foster that connection while supporting diversity in all forms and making sure that students are able to form their own communities based on whatever characteristics they find most salient. Students should feel both a sense of welcome and belonging. If students are feeling alienated in any way, their chance of persisting will decrease. Tinto (1993) described his concept of social integration as the degree to which a student feels comfortable and belongs to one or more affinity groups. Tinto encourages institutions to educate the entire campus about issues of racism and uphold "the important notion that to be fully effective, college communities, academic and social, must be inclusive of all students who enter" (1993, p.187).

Campus communities.

In the first edition of his seminal work, *Leaving College: Rethinking the Causes and Cures of Student Attrition,* Tinto (1987) suggested that students drop out because of challenges they experience in one of four areas: adjustment, difficulty, incongruence, and isolation. When students have difficulty transitioning from high school and their former family life, socially and/or academically, they may depart due to adjustment issues. Tinto's category of *difficulty* concerned those students who do not earn the grades necessary to continue at the institution. *Incongruence* involved students' perceptions that they do not mesh with the institution. *Isolation* referred to situations where students simply have a significant lack of interaction with the institution. Three of these four areas could be significantly remedied if a student made appropriate close connections with a campus community. Even academic difficulty may be assisted by finding a community, if that community also serves as a study group or otherwise reinforces behaviors that support time on task and academic success. Tinto suggested that one way students can find congruence, or at least avoid total incongruence, is within student subcultures. Students finding smaller communities with which they feel a sense of belonging can increase their chances of persistence. This argument is supported by the research on living-learning communities and freshman cohorts that are used to increase retention. Kuh, Schuh, Whitt, et al. (1991) also make this sense of community a high priority in creating institutional cultures that will support persistence. Tinto (1993) remarked that this community is especially important for minority students and may depend on having large enough numbers of minority students to create a viable community.

Students of color who do not feel supported by their institution are unlikely to persist. Tierney (1992) asserted that institutions should take responsibility for adequately supporting the diverse needs of their students. If students of color perceive that the institution is supportive of them, they are more willing to put in the additional effort on the activities that are necessary to succeed (Kuh et al., 2007). Allen (1991) explained how students of color are forced to adjust to the culture of PWIs and those difficulties with this adjustment lead to lower rates of persistence and degree attainment. A campus culture that is clearly supportive of diversity can decrease some of these difficulties in adjustment for students of color (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998). A campus that can claim a culture that supports diversity should include support for diversity at all levels: diverse students, faculty, and staff; diverse epistemologies, including diverse ways of teaching and learning; diverse opportunities; and diverse communities and cultures. The institution should articulate a clear message that diversity is an essential and vital value of the campus culture (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998).

Faculty mentoring and peer mentoring programs can be directed towards students of color to provide them with resources and coping mechanism that can ease the transition and adjustment to the institution (Lotkowski, Robbins, & Noeth, 2004). Although students of color should not be expected to change to conform to the campus culture, these students will be required to adopt a new language of higher education and learn to navigate multiple worlds and potential changes to identity (Rendón, Garcia, & Person, 2004). Institutions should acknowledge and support students in this transition.

Benefits of diversity.

The benefits of diversity for college campuses, and those who inhabit them, have been eloquently enumerated by numerous researchers. Milem and Hakuta (2002) argued that diversity improves several learning outcomes for students including improvements in critical thinking, intellectual engagement, and academic motivation. Increased involvement with diversity leads to an increased sense of community and increased satisfaction with college which has been linked to greater persistence. Milem and Hakuta (2002) encouraged institutions to strive for three types of diversity: structural diversity (a diverse student body), diversity-related initiatives (Ethnic Studies, cultural programs), and diverse interactions (students having relations with a diversity of other students). They asserted that making diversity a prized element of the institutional mission can create positive institutional transformations for teaching and learning (Milem & Hakuta, 2002). Hurtado, Milem, Clayton-Pedersen, and Allen (1998) urged institutions to ensure that students of color feel welcomed and valued by increasing the representation of different cultural groups and communicating that diversity is a highly valued element of campus. In addition, this clear message about the value of diversity demonstrates to students of color that not only are they welcome on these campuses but their cultures and their input are valued and necessary to improve the learning environment for everyone. This sense of value and inclusion should make students of color feel more at home on campus and make the transition to college less difficult (Allen, 1991).

Sense of membership.

Tinto (1993) asserted that "effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members" (p. 147). This commitment includes support for diverse communities and groups with assurance that all individuals and groups are part of the larger community of scholars. In these small subcommunities, students develop social networks which could significantly increase persistence for students of color (Skahill, 2002). These various campus subcommunities should interact with each other with the ultimate goal of educating undergraduates. Institutions can increase persistence rates by putting into place mechanisms that will ensure that all students feel part of one or more smaller groups as well as the larger campus community. Kuh, Schuh, Whitt, et al. (1991) urged campuses to adopt a "theory of membership" that would tell students:

> Because you have chosen us, and we have chosen you, we will do everything we can to help you succeed. This is your place now, your home, and we are happy to have you here. You belong here and you are, by the very act of choosing us, a full member of the community (pp. 56-57).

Yet, institutions should be mindful that especially some students of color and first-generation students will feel conflicted in their allegiance to their family and their new membership in a institution of higher education (Rendón, Garcia, & Person, 2004).

Researchers suggest that to increase retention, the overall campus community must be inclusive of diversity so that students believe that they are part of something unique and special without giving up those aspects of themselves that are unique and special. Turner (1994) argued that students of color often feel like "guests" on campus rather than feeling at home. Institutions should strive to give students of color ownership

over their own communities. If successful, students of color will likely adapt to college more successfully and avoid the "isolation, alienation, and lack of support" that prevented their predecessors from persisting (Allen, 1991, p. 5).

This kinship, this focus on community, intersects explicitly with the other campus characteristics. Tucker (1999) asserted that this sense of community will interweave social and academic integration holistically to create a sense of belonging that encourages and predicts student persistence. Through engagement activities that are supportive of diversity, a sense of community can be created in which all students can participate and feel a sense of belonging. However, many students of color are likely to benefit from also participating and creating a sense of community with a student group or organization that is connected to a racial or ethnic identity (Trevino & Ewing, 2004).

Also, this commitment to community should include appreciation for and learning about other communities on and off campus. Institutions should consider fostering inter-group dialogues so that various groups of students identified along any number of demographic characteristics can have an opportunity to interact and learn from each other (Trevino & Ewing, 2004). A commitment to incorporating various cultures and diversity of knowledge into a larger campus community will provide the support necessary to engage and retain all students, especially students of color.

Fries-Britt and Turner (2002) used qualitative interviews of successful Black college students at a PWI and a HBCU campus to discern their personal experiences and discover what assisted them in their success. Their findings recommended that each campus provide vital support for students of color and ensure their involvement. For

Black students at PWIs, this means finding students with similar backgrounds to provide

a sense of community and support, while also integrating more with the White

community and White culture than students at HBCUs do. The HBCUs have an almost

built-in sense of community and it would be helpful for other institutions to try to create

that where possible. Students at HBCUs believed that faculty and staff gave them more

individual attention and went out of their way to support them compared to PWIs where

they felt more isolated and believed that the structure worked against them. Also Black

students felt that they were forced to represent their race in class discussions and

elsewhere on campus and had a lack of appropriate social engagements. Fries-Britt and

Turner (2002) recommended enhancing the curriculum to include more diversity issues

and classes while not calling on minority students to represent their race from their

perspectives. For increased persistence for these students, campuses need to ensure that

students of color have appropriate support and involvement opportunities that move

beyond superficial displays of diversity support.

Rendón, Jalomo, and Nora (2000) critiqued Tinto's initial retention work for

describing difficulties that minority students experience in becoming acculturated to

campus norms in terms of a person-centered problem rather than a situation-centered

problem. In the second edition of *Leaving College: Rethinking the Causes and Cures of*

Student Attrition, Tinto (1993) shifted the burden of the problem from the families and

communities of students of color to the campus environment by acknowledging that

"many of the difficulties that students of color encounter on a predominately White

campus reflect the behaviors and attitudes of the students, faculty, and staff about them" (p. 187).

Involvement opportunities.

Kuh et al. (2007) would argue that creating involvement opportunities, areas of engagement, would be the most essential campus factor for persistence. Based on his decades of research, Astin contended that "learning, academic performance, and retention are positively associated with academic involvement, involvement with faculty, and involvement with student peer groups" (1993, p. 394). Involvement opportunities include many forms of engagement such as study abroad, campus clubs and organizations/student groups, participation in campus activities, athletics, sporting events, undergraduate research, and other opportunities to connect with campus peers, faculty, and staff. Students who are more engaged are likely to show gains in learning and improvement in GPA, which were important factors that Adelman (1999) found to be linked to persistence (Tinto & Pusser, 2006). Kuh et al. (2007) argued that the extent to which students take part in educationally effective activities determines their student success. Kuh, Cruce, Shoup, and Kinzie (2008) discovered that being engaged on campus and participating in various involvement opportunities was directly linked to increased retention, was especially important for students of color, and could even compensate for students who had lower pre-college academic characteristics.

As evidenced by the book *Involving Colleges,* ensuring that students feel connected to campus, their peers, and their educational goals will be a first step for any institution that wants to increase retention rates (Kuh, Schuh, Whitt, et al., 1991). This

qualitative multi-case study attempted to explain connections between student

engagement and institutional characteristics and activities through detailed descriptions

of the culture, environment, mission, polices, and practices of the various institutions.

The research team investigated fourteen institutions to illustrate different principles that

could then be applied more broadly to other institutions and concluded that some

institutions are very adept at providing environments that encourage out-of-class learning

by ensuring that: "faculty members and staff take time for students; the blending of

curricular and out-of-class learning experiences is acknowledged and valued; everyone is

held to high, clearly communicated standards; [and] institutions value undergraduate

learning wherever it occurs" (Kuh, Schuh, Whitt, et al., 1991, p. 4). The authors

developed six overall recommendations for institutions to follow to improve engagement.

Kuh, Schuh, Whitt, et al. (1991) suggested that institutions should (a) "have a clear

mission" (p. 341), (b) "value and expect student initiative and responsibility" (p. 345), (c)

"recognize and respond to the total student experience" (p. 347), (d) "provide small,

human-scale environments and multiple subcommunities" (p. 351), (e) "value students

and take them and their learning seriously" (p. 359), and (f) "generate feelings of loyalty

and a sense of specialness" (p. 363). Within each conclusion, the authors provided

specific suggestions, such as ensuring that the campus mission is familiar to the entire

campus community via events and publications and that resource allocation and program

development reflect and reinforce that mission.

     Kuh, Schuh, Whitt, et al. (1991) specifically highlighted those involvement

opportunities that included formal and informal induction activities used to welcome

newcomers and integrate them into the campus community as especially useful for

retention efforts. They encouraged schools to carefully consider their institutional culture

and reflect on ways to analyze and shape institutional culture for the better. They also

recommended a variety of specific programs that can improve persistence for certain

students, such as cooperative education programs or services targeting at-risk students.

Kuh, Schuh, Whitt, et al. (1991) also made particular suggestions for improving student

and faculty interaction and ensuring that students perceive a sense of caring by the

faculty, which demonstrates the interaction among various campus factors listed in the

Persistence Pyramid.

Pascarella and Terenzini (2005) asserted that various forms of social and

academic involvement improve students' chances of degree attainment by connecting

them to campus and groups on campus which increases their commitment to the

institution and subsequently the goal of graduation. Some research has found that

specifically on-campus employment increased the likelihood of graduation (DesJardins,

Ahlburg, & McCall, 2006). Other research has shown that work-study has been linked to

student success in several areas, including effectively using the educational system,

improved grades, enhanced self-esteem, integration with the campus environment, and

persistence (Kuh et al., 2007). Some studies suggest that work-study is particularity

helpful if it is aligned with a student's academic or career interests (Kuh et al., 2007).

Building on the work of Astin, Kuh, and others who have suggested this link

between student engagement and improved persistence rates, Kezar (2006) examined the

role that institutional size plays in engaging students. She was concerned that with the

growing size of many universities and the proliferation of large, impersonal, and/or passive learning environments that do not engage students and do not encourage learning. Kezar's study takes advantage of the DEEP (Documenting Effective Educational Practice) research project. DEEP was a multi-site case study that included a 24-member research team conducted in-depth personal interviews, as well as campus surveys, over a two-year period. She used the qualitative data collected in this project to create her own study on engagement. She argued that small institutions generally used values and philosophy to achieve engagement, while large universities generally used more structured activities and programs. She then organized the individual results around four areas: faculty-student interaction, active and collaborative learning, academic challenge, and supportive campus environments. She reiterated that the size of the institution will affect methods for engagement. In particular, she explained that the appropriate use of technology on large campuses can assist in the effective engagement of students. She noted that very few schools employed standard practices to measure and evaluate programs for effective engagement. She suggested that large institutions attempt more coordinated efforts at student engagement if they want to increase their level of success. She suggested that smaller schools ensure that their traditions and philosophies on engagement remain alive by evolving appropriately to changing conditions.

Caring culture.

The final campus factor that can increase persistence is the creation of a caring culture that is student-centered and maintains a focus on undergraduate education and a "students first" philosophy. Students should feel a sense that the institution has a strong

commitment to undergraduate education and student success that permeates the entire

campus and everyone who works there. This concept of a caring culture can be seen in

various aspects of the other three campus factors and is closely connected to them.

Certain educational support services done in an intentional way can add to a caring

culture. A caring culture would include numerous support services for students including

psychological support, mental health counseling, life-coaching, goal-setting, as well as

scholarships and other forms of resources and support for students or groups that need

additional support. Mentoring programs, career services, advising and other forms of

student "soft" support services could also be considered in this area. A caring culture aids

in creating a sense of community and helps students become engaged on their campus.

Kuh et al. argued that "the single best predictor of student satisfaction with

college is the degree to which they perceive the college environment to be supportive of

their academic and social needs" (2007, p. 53). Kuh, Schuh, Whitt, et al. (1991) found

that successful "involving" colleges maintained an "ethic of care," whereby faculty and

staff took the time to be involved with students' lives and demonstrated their care and

concern for them. Plus, "as students sense this ethic of care, they begin to care for one

another," which would increase the level of social integration for both the giver and

receiver of care (Kuh, Schuh, Whitt, et al., 1991, p. 56). A caring culture should emanate

from every staff position ensuring support and service to students. Tinto argued that

effective retention programs must "put student welfare ahead of other institutional goals"

and be "committed to the education of all, not just some, of their students" (1993, p. 146).

A commitment to the education of undergraduates should permeate every facet of the

institution. A caring culture does not mean coddling, but rather should follow the Sanford mantra of "challenge and support" that has been repeated in student service centers for decades (as cited in Chikering & Reisser, 1991). Faculty and staff need to support students and ensure their needs are met while maintaining high expectations and challenging students to move beyond their comfort zones.

In a study of large public universities that serve large numbers of low-income students, those with the highest graduation rates had several common practices that support this concept of creating a caring culture (Engle & O'Brien, 2007). They assisted students' navigation of these complex universities by assigning "first responders," faculty or staff charged with front line responsibilities, to meet student needs. They had successful advising, early warning, and intervention programs to support students who are having academic difficulty. They had support programs tailored to various at-risk populations. They trained faculty and staff to be aware of all the academic and social support services that were available to students. They required or had high participation in campus activities that personalized individual students' college experience. In addition, campus leadership promoted a campus culture that focused on student success and rewarded faculty and staff who helped to improve campus culture and retention rates (Engle & O'Brien, 2007).

In a study of low-income students who transferred from community colleges to highly selective institutions, Bensimon (2007) noted that each of them was significantly assisted by at least one individual on campus, such as an adviser, a faculty member, or a mentor, who supported them and provided them with the necessary information and

academic resources required to be successful. Kuh et al. (2007) noted that bachelor's

degree attainment is increased at institutions with high student participation rates in

activities that demonstrate personal involvement and concern for the individual student.

At Indiana University Bloomington, a study of programmatic efforts based on higher

education research and employed to enhance the undergraduate experience, suggested

that complimentary efforts to create a campus ethos based on commitment to student

success resulted in improved retention rates overall and significantly narrowed the

retention gap for students of color (Hossler, Kuh, & Olsen, 2001).

In a study of the DEEP schools, Kuh, Kinzie, Schuh, and Whitt (2005) found

several qualities at these institutions that support student success including valuing

undergraduates and an "unshakeable focus" on their learning. They also discovered

various efforts that were useful in creating supportive campus environments, including

utilizing advising networks and employing multiple safety nets for students. They

contend that students' commitment to an institution and their persistence can be increased

by ensuring that students feel a "sense of place," connecting them to the campus through

activities as well as the physical environment of campus. Structuring the physical

environment to encourage student interaction with peers and faculty, such as placing

study spaces close to faculty offices, can enhance this sense of community and caring

culture. Creating such supportive environments is essential for student success based on

the clusters of effective educational practice utilized by the Nationals Survey of Student

Engagement (NSSE). According to the NSSE, students will be more satisfied (and, thus,

more likely to persist) with institutions that help students succeed academically and

socially, help them handle nonacademic responsibilities, and ensure good relationships

between students and faculty, staff, and their peers (Kuh, Kinzie, Schuh, & Whitt, 2005).

Based on this, they made several recommendations for institutions to improve student

success including the demand that "senior leaders must publicly and repeatedly champion

undergraduate education" (Kuh, Kinzie, Schuh, & Whitt, 2005, p. 299).

Utilizing the Pyramid

As noted by the Persistence Pyramid, there is a tremendous amount of research on

what helps and what hinders students' persistence on their path to degree attainment.

Much is known about individual student risk factors that increase and decrease the

likelihood of retention and persistence to degree, as well as campus environments,

resources, and opportunities that increase or decrease the likelihood of retention and

persistence for students. However, there is very little understanding of how these various

factors (student characteristics, opportunities in the campus environment, connections

with family, financial resources) interact with each other. How do they overlay and

overlap, intersect, exacerbate or diminish certain positive or negative effects when it

comes to students making decisions about persisting or stopping out? I endeavored to

explore those interactions in an attempt to gain an understanding of how the myriad

factors intersect in particular ways for students and gain a better understanding of the

decisions that low-income students make with regard to college persistence. The

Persistence Pyramid served as the conceptual framework that guided this qualitative

inquiry into the various factors that affect persistence for low-income students.

Chapter 3: Methodology

Regardless of all that is known about persistence based on the previous

persistence research, significant gaps in graduation rates continue to exist between low-

income students and their high-income peers. Tinto (2006) suggested that more

qualitative research could help to gain a better understanding of the reasoning behind

students' individual persistence decisions and emphasized the need for more research to

be done on persistence for low-income students. To that end, this study sought to explore

the issues of persistence from the perspective of low-income students who were

successful. Employing a qualitative approach, this study sought to illuminate which

factors of persistence were most salient for low-income students and how various factors

interacted with each other. This study sought to discover what such an inquiry may

suggest for ways to improve persistence rates for low-income students.

This study was guided by the following research questions:

1. What factors are most salient for low-income college students in articulating

   their ability to persist?

2. How do various factors of persistence interact with each other to enhance or

   hinder low-income students' efforts toward baccalaureate degree attainment?

Methodological Approach

I used a case study approach to illuminate the issues surrounding persistence for

low-income students. Yin describes a case study as an "empirical inquiry that investigates

a contemporary phenomenon within its real-life context, especially when the boundaries

between phenomenon and context are not clearly evident" (2003, p. 13). Much of the

previous research failed to consider the big picture and apply the overlapping and interacting persistence factors specifically to the confined context of persistence rates for low-income students. Stake asserts that "qualitative case study is valued for its ability to capture complex action, perception, and interpretation" and "previously unknown relationships and variables can be expected to emerge from case studies leading to a rethinking of the phenomenon being studied" (as cited in Merriam, 2009, p. 44). Yin asserts that case study inquiry "benefits from the prior development of theoretical propositions to guide data collection and analysis" (2003, p. 14). I utilized the previous research on college persistence and retention, including the research on low-income students, to guide my data collection, especially my interview questions.

I employed an embedded model of case study analysis (Yin, 2003), in which each student is an embedded unit of analysis and those units are embedded in the one overall context of the study institution. The overall context of the case, which delineated the boundaries of the case, was college students currently enrolled at a large, doctoral-granting, public research university who met the additional following criteria: (a) were Pell Grant recipients which will signify their low-income status,[1] (b) began as first-year students in fall semester 2008 so that they were in their senior year at the time of the study, spring semester 2012, and (c) had over 90 credits completed by the start of fall semester 2011 which reinforced the notion that they have been successful and have been able to persist to at least this point. Within the overall context of the case, each student

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[1] For the 2011-2012 school year, students whose parents had an Adjusted Gross Income of $31,000 or less had an automatic zero Expected Family Contribution which means that they would be eligible for the maximum Pell Grant. Students whose families have an Adjusted Gross Income of less than $50,000 may qualify for a prorated Pell Grant. For 2010-11 Pell Grant recipients, almost 3/4ths had family incomes below $30,000 and the median income was around $16,000 (NASFAA, 2011).

represented an embedded unit of analysis or mini-case. Other researchers might refer to this as a collective case study (Stake, 1995) since I identified themes and conclusions based on the analysis across all of these students. I viewed this embedded model as a single case since the context and boundaries of the case are the same for each student, even if there were individual differences among the students.

I considered the context of the study institution as serving as an instrumental or representative case since the majority of low-income students in the United States attend public institutions (Engle & O'Brien, 2007) and almost 60% of college students attend the 13% of institutions which enroll over 10,000 students (Snyder & Dillow, 2012). The study institution is a large public institution and this particular university has a significant gap in the graduation rates for low-income students compared to their higher-income peers. At the study institution, the six-year graduation rate for the Fall 2004 cohort of first-year students was 57.7 percent for low-income students, but 73.2 percent for all others that did not fall into that group ("University of Midwest", 2011). Thus, the site of this case could be particularly illustrative of the general persistence issues facing low-income students in public universities.

Yin categorizes this type of case study theory building as "analytic generalization, in which a previously developed theory is used as a template with which to compare empirical results of the case study. If two or more cases are shown to support the same theory, replication may be claimed" (2003, pp. 32-33). Although Yin argues that "case studies are generalizable to theoretical propositions" (2003, p.10), I am not asserting that my findings are generalizable to all low-income students at all institutions. However, my

findings provided a nuanced understanding of the most salient persistence factors that helped and hindered a group of low-income students on their path to baccalaureate degree attainment at the study institution and how those factors interact. Based on those findings, there are clear implications about what institutions, students, and others could do to attempt to increase the persistence rate for low-income students. The findings of this study can be used in two ways to advance research and persistence rates: (a) the study institution and similar institutions could implement some of the practical suggestions that I have included which are aimed at improving persistence for low-income students and test their effectiveness, and (b) other researchers could conduct additional qualitative and quantitative studies that would replicate or test the theoretical propositions implied by the findings to see if similar studies result in the same factors being most salient for the persistence of low-income students.

Conceptual Foundation

My conceptual basis for approaching the research was from a pragmatic perspective. I was most concerned about finding solutions to the problem of persistence rates for low-income students. Creswell maintains that "pragmatist researchers look to the 'what' and 'how' to research based on its intended consequences—where they want to go with it" (2003, p.12). This fit my research questions and my goals for the research. I was not interested in exploring this area merely to gain insight into the experience of low-income students, although such information is still helpful. I wanted to embark on the next phase in persistence research by identifying some areas that can be explored further, both in terms of additional persistence research, as well as suggested institutional policies

for higher education institutions that may increase persistence rates for low-income students. In addition, I wanted to provide recommendations to low-income students, their families, and higher education faculty and staff that will suggest actions that each group can employ to increase the chances of persistence for low-income students.

Pragmatists do not view truth as "a strict dualism between the mind and reality completely independent of the mind," but rather simply strive to gain the greatest understanding of a research problem (Creswell, 2003, p.12). I think the higher education community has a good understanding of many factors that help and hinder persistence for students, including low-income students, yet there remains a significant gap in the graduation rates for low-income students compared to their higher-income peers. My pragmatic focus is centered on a realistic understanding of what can and cannot be done in most higher education settings to improve the graduation rates for these low-income students. With this study, I sought a more nuanced understanding of persistence issues and their impact on low-income students, in particular how some low-incomes students with multiple risk factors are able to persist and succeed.

Based on that greater understanding, I developed some propositions that could translate to some very pragmatic solutions that could be implemented to improve persistence rates for low-income students. According to Creswell (2003), a pragmatic approach often utilizes a mixed-method approach. Although my study was not technically mixed-methods research, I modeled my study on a mixed-methods philosophy. Even though I conducted only the qualitative portion of the research, the qualitative exploration was based on the previous quantitative and qualitative research.

My semi-structured interview questions with low-income students were based on the persistence factor areas depicted in the Persistence Pyramid. As noted earlier, the vast majority of research that informed the Persistence Pyramid as my conceptual framework was quantitative in nature. Based on this quantitative research, supplemented with some broad-based qualitative work, I developed the points of exploration that I employed to examine persistence issues for low-income students.

Unlike typical grounded theory research, which attempts to build theory that emerges inductively from the data and does not start with a theory in mind (Merriam, 2002), I, instead, wanted to develop some mid-range theoretical propositions based on the data that were derived from an exploration built upon existing research. Case study can be utilized in the creation of substantive theory, which is theory applied to specific everyday situations as opposed to grand theory (Merriam, 1998). My goal was to extrapolate and further define the knowledge on factors of persistence for low-income students.

A common method of analysis in qualitative case studies is the constant comparative method. The constant comparative method groups data into conceptual categories and then incidents within those categories are compared in order to develop theoretical propositions (Corbin & Strauss, 1990). Although the constant comparative method originated from grounded theory research, many qualitative researchers employ this method, even if they are not seeking to generate theory (Merriam, 1998). I employed the constant comparative method and applied it to this case study by using the current

literature as a guide for semi-structured interviews to uncover the most salient persistence

factors and their impact low-income students.

The next movement forward in persistence research should include developing

pragmatic solutions to increase persistence for low-income students. Creating practical

solutions requires an in-depth nuanced understanding of individual persistence cases that

can only be derived through qualitative research. This study should be viewed as part of

an iterative process, among multiple qualitative studies, aimed at gaining additional

theoretical and pragmatic insights over time. This line of inquiry is most likely to be

successful when it is built on a back-and-forth between quantitative studies and

qualitative studies. Quantitative studies can test for the existence of particular persistence

factors across many students or institutions. Qualitative studies can discover fine-grained

nuanced issues on the individual student level that are often missed by quantitative

research or even larger-scale qualitative studies. The insights gained from in-depth

qualitative analysis, sometimes replicated over multiple studies, can then be tested in

future quantitative studies. I believe that only through this iterative process of continuing

to build theory and develop pragmatic solutions based on qualitative and quantitative

work will the United States witness a significant increase in persistence rates for low-

income students. This study is but one step forward in that process.

Participant Selection

The Office of Institutional Research at the study institution sent an e-mail to all

students who were enrolled in Spring 2012 who began as first-year (new high school, not

transfer) students in Fall 2008 and were Pell Grant recipients. The e-mail (see Appendix

A) was sent to 457 students who met the above criteria, which represents approximately ten percent of the Fall 2008 first-year cohort. These low-income students were in their fourth year of college and nearing graduation. The e-mail invited them to contact me if they were interested in participating in the research study. The students were offered a $50 gift card for participating in the study. Thirty-nine students responded to the e-mail invitation. I exchanged additional information through e-mail with 30 of the 39 students. Of those 30 students, I scheduled 24 students for interviews. In deciding which students to schedule for interviews, I primarily relied on a first-come, first-served basis.

Potential participants who respond to the initial e-mail received an e-mail from me with a consent form (see Appendix B) and additional information about the study (see complete text of e-mail in Appendix C). In this second e-mail, I asked the students to provide answers to various demographic questions and personal information including their major, their college of enrollment, and their anticipated term of graduation. Those students who responded first to the initial e-mail request, along with follow-up information and times available for interviews, were the first ones to be scheduled. As more of the sample began to be assembled, I wanted to fill the remaining spots based on an objective of including a variety of students from different academic areas at the institution and representing different demographics based on ethnicity, gender, first-generation status, and academic preparation as measured by standardized test scores. For the most part, choosing the first to respond gave me a very diverse pool of students (see Chapter 4 for detailed demographics and an introduction to the students in the sample). Since I had already scheduled some White females from the liberal arts area, I initially

delayed scheduling a few more from that group, but I ultimately interviewed two of them from the delayed group. Of the 24 students scheduled, I interviewed 21 students in total because three did not show up for their interview. The interviews ranged from 40-124 minutes. The mean average time was 67 minutes. All students were asked the same questions but some students had more elaborate stories and answers to share.

Triangulation and Validity

When we met for the interview I asked students to provide me with a copy of their degree audit, essentially an academic snapshot of their time in college. The degree audit allowed me to authenticate certain aspects of the participant's interview. This report shows how close the student is to graduating as well as their courses, grades, and GPA. I used the information in the degree audit as a form of triangulation with the interview data to understand the students' experiences and authenticate the details of the examples that they provided. For example, when they told me about courses with which they struggled or were successful, or changes in their GPA over time, I was able to verify that with the degree audit. Also, their degree audit allowed me to verify that they started at the institution as a first-year student in Fall 2008 as well as other pieces of information that they shared with me. In addition, I was able to compare each student's experience with the experiences of other students in the study and previous research on low-income students, persistence, and retention. This constant comparison allowed me to place individual experiences into a broader context. I also wanted to authentically represent each individual as well as the group as a whole. As a result, I ensured that each student's voice was allowed to emerge in the dissertation and that the examples and quotes that I

included from their interviews accurately represented both the group and the individuals

(See Appendix D for the numerical distribution of quotes by each student).[2] Both forms

of triangulation added to the credibility of the study and corroborated the internal validity

of the themes that emerged from the interview.

Data Collection, Interview Content, and Verification

In addition to their degree audits that I collected when they arrived for their

interview, I used the information collected during the semi-structured interview as the

primary data source. I asked them overall questions about their college experience and

their ability to persist as well as specific questions related to each of the eight areas of

factors enumerated in the Persistence Pyramid (see Appendix E for the entire interview

protocol). I conducted two pilot interviews with students who met the general criteria of

current students at the study institution who had received a Pell Grant and were in their

junior or senior year of college. Based on those pilot interviews, I modified the interview

protocol by paring down the number of questions and improving the flow of the questions

to allow the students' experiences to emerge organically with more open-ended questions

and fewer detailed questions.

I recorded all interviews electronically and had them transcribed. I listened to

each interview numerous times and I went over each transcript of the interview to ensure

that it was appropriately and accurately documented. I sent each participant an e-mail

with a copy of the transcript from their interview. I asked them to make any corrections

on items that were incorrectly transcribed or heard and to clarify anything that did not

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[2] I included noticeably fewer quotes from one student, Fiona, because she had fewer relevant experiences or issues with the various persistence factors as the other students. In addition, she was not able to articulate some of her experiences in a way that would have been illuminating or helpful to the reader.

come across in the way that they had intended. Most of the participants made minor edits

and three students added a couple points of clarification in relation to specific items that

they had referenced in the interview. I did not have them edit grammar or related

idiosyncrasies inherent in spoken language because I wanted to retain their voice in their

quoted passages. Plus, the edits would have been extensive and taken them an inordinate

amount of time to correct since very few college students or others speak in proper

English. After they completed the verification process of the transcript of their interview,

I gave each participant their $50 gift card.

Protecting Participants

I received approval for this study by my institution's Institutional Review Board

(IRB) for the Protection of Human Subjects prior to beginning the study (see Appendix

F). I assured each participant that they could withdraw from the study at any time without

any negative consequences. I also assured the students that their information will be kept

confidential and that no identifying information will be used in the dissertation. I used

pseudonyms for all students to report their story. Immediately upon receiving each

student's degree audit, I used a permanent black marker to redact any identifying

information, such as their name and student ID number. I wrote their subject number, and

later their pseudonym, on the degree audit so I could connect it with the interview for

triangulation and analysis. In reporting the data, when there were details that clearly

identified a particular student, I altered the specific details without changing the meaning.

For example, when students mentioned the name of a restaurant where they worked, I

changed the name. After completion of the study, all recordings of the interview were

erased. After three years, all degree audits and transcripts of the interviews will be shredded.

When I used the quotations from the students' interviews in the text of this document, I retained their voice as much as possible and only made minor grammatical changes when necessary to retain the flow and readability of the document. I did not include "sic" next to the grammatical errors due to the frequency of errors in spoken language, especially among non-native speakers of English, and it would have distracted from the flow and readability of the quotes and the dissertation. Most grammatical errors were left in the quotes to retain the authenticity of the comments and allow the vocal syntax of each participant to emerge for the reader in order to get a full sense of the student. Words in brackets were added to convey the meaning or disguise identifying characteristics, but quotes were left untouched as much as possible to retain authenticity, and were only edited to clarify the meaning of the students' statements.

Data Analysis and Reliability

Following the constant comparative approach to collecting and analyzing data, as soon as I begin collecting the data and conducting some interviews, I began analyzing the data and considering if there were particular follow-up questions or areas of inquiry that I need to include with subsequent participants. As noted earlier, I listened to each interview at least twice to get an overall feel for the experience of the student and which experiences had the greatest impact on their persistence. I also read each transcript at least twice to fully appreciate each particular student's circumstances and experiences. This process allowed me to enumerate some themes in each of the eight factor areas in

the Persistence Pyramid. I developed codes for the eight areas as well as the emerging themes in each area. In additional several themes emerged during the coding that were not initially connected to one of the eight areas until I was done coding and able to consider where those themes fit into the larger picture.

All the interview transcripts were divided into short sections of not more than 1-3 sentences for ease of coding, so that each thought by the student could be coded appropriately. I coded each section of the transcript into the corresponding relevant themes. Most sections had one or two codes, but some had as many as four codes. (See Table 1 for the numerical distribution of codes in each of the eight areas and in each of the themes.) I based my initial broad theme categories on the areas of the Persistence Pyramid that guided my interview questions. However, in each broad area, the specific themes that emerged and their corresponding representation in the Chapter 5 results section of this study are all derived from the interviews themselves. I verified the accuracy and reliability of my coding by having a recent Ph.D. graduate from my program code check one of the transcripts. I provided her with a list of my codes and an unmarked transcript from one of the average-length interviews. After she had coded the transcript, we compared our coding and discussed any discrepancies. We had initial agreement on 161 codes. She misunderstood my coding intentions in two of the coding themes. Once that was clarified, we had agreement on 14 additional codes. Once we discussed each code, we came to agreement on 27 more codes (she added or subtracted 19 codes and I added or subtracted eight codes). We remained in disagreement on three codes. After the code clarification, we had initial agreement on 85% of the codes and

Table 1
Numerical Distribution of Codes and Themes

Persistence Area	Theme	Area Total	Codes per Theme
Academics		637	
	Classes/Major		467
	Studying/Homework		122
	High School Preparation		48
Social		471	
	Friends/Classmates		261
	Faculty/Staff		201
	Mentors/Mentees		111
	Isolation/Disconnection		48
Psychological		519	
	Sense of Purpose		24
	Career/Post-grad plans		239
	Familial Support		114
	Motivation/Expectations		142
Economics		814	
	Costs/Financial Aid/Loans		233
	Work/Jobs/Internships		263
	Cultural Capital/First-Generation		98
	Time Management		63
	Living on Campus		100
	Commuting		13
	Family or Personal Problems		44
Educational Support		346	
	Support Services/Advising etc.		301
	Unaware of resources		45
Diversity & Community		291	
	Diversity Support		207
	Community Membership		48
	Campus Identification		36
Involvement		432	
	Student Groups		151
	Research		51
	Campus Activities		86
	Service/Volunteer		65
	Study Abroad		79
Caring Culture		126	
	Supportive Environment		55
	Negative Interactions		71

came to eventual agreement on 99% of the codes. Thus, the coding schema had strong internal validity and suggests strong inter-rater reliability if others were to use this coding schema on these or other interviews.

Once the initial coding was done and verified, I did axial coding by comparing the various sub-themes and themes to each other and to the experiences illustrated by the students as well as pre-existing persistence theories and research. In particular, I paid close attention to the students' responses when I gave them a couple opportunities to tell me which factors made the biggest difference overall to them in aiding their persistence. Based on the themes that emerged, I analyzed them for importance, impact, and relevance to the students and their situations.

Utilizing the constant comparative method, I considered some overarching themes that emerged and how various themes interacting to affect persistence. Based on the evaluation and analysis of these themes and their relative importance, I developed some implications for practice to improve persistence rates for low-income students. I also suggested areas for further research based on the findings of this study.

Assumptions and Personal Lens

I approached this research with some basic assumptions and particular lenses. I believe that earning a bachelor's degree matters and can make a substantial positive difference in the life of low-income students. I believe that low-income students are inherently as capable of graduating from college than their higher-income peers. I believe in a social justice model of citizenship, whereby all inhabitants have an equal possibility of achieving success. My desire to help these students stems from a social justice

philosophy that argues in favor of a society that is mindful of distributive justice: the way

the 'goods' of a society, such as education, are distributed or redistributed such that the

disadvantaged members have equality of opportunity to that of the more advantaged

members of society (Miller, 1999). I believe that social and economic mobility can be

extremely challenging in the United States for low-income students and higher education

provides one of the best opportunities to attain higher mobility.

My personal lens stems from the fact that I was a Pell Grant recipient as an

undergraduate. Although my personal circumstances may not have been as dire as many

of the low-income students today, I still retain great empathy for their situation.

Thankfully, as a National Merit Scholar, I was offered a full-tuition benefit at several

schools. This significantly negated some of the impact of my low-income status, yet my

low-income background affected numerous choices that I made. I narrowed my college

options down to a small, well-respected, relatively unknown, public liberal arts school

and a more prestigious, elite, private liberal arts school. Even though tuition would be

completely covered at both, I chose the public school because the on-campus housing

costs for the private school were more than double that of the public school. My lack of

understanding about the financial aid process made me unaware that some of this

difference would have been covered by an increased Pell Grant award. Plus, I chose the

public school because I was concerned that I would not fit in with the more wealthy elite

students that went to the private school, and I was worried that I would not have the

financial resources to engage in the social and extra-curricular activities that many of

them would.

In addition, as a first-generation college student, I have great empathy for first-generation college students, many of whom are also low-income. My lack of understanding of the financial aid process as well as other details of attending college illustrates the information gap experienced by many first-generation college students. This information void can be have a dramatic effect on those who are also low-income because they may not have the understanding of how to navigate the system to finance college attendance. My father has only an eighth-grade education and my grandfather was illiterate, so there was a significant gap in knowledge and understanding about college. My father thought that a four-year degree was a waste of time and money. Fortunately, I had older siblings who attended college and completed bachelor's degrees, so I had at least a vague understanding of the college process.

During my undergraduate education, I continued to make decisions that reflected my low-income status. I maintained an on-campus job for the entirety of my last three years on campus. I never considered studying abroad, participating in any groups that cost money, or embarking on a "real" spring break trip, recreational or educational. Each summer I worked as many hours as possible to save up money for next year. One summer I worked at a telemarketing firm from 4 p.m. to 10 p.m., and then worked at a printing factory from 11 p.m. to 7 a.m. at $4.95 an hour. Throughout my undergraduate career, I was always mindful of the choices I was making with my money. Generally, toward the end of each term, my financial aid money for living expenses would run out and I would take out cash advances on my credit card that I would then pay back with the following term's financial aid.

Even as a graduate student, my low-income background affected some of my choices. In order to pursue my master's degree, I had to ensure that I had an assistantship that included full-tuition benefits and at least a small stipend. I had to find a cheap place to live so that I could minimize the amount of loans that I needed for living and miscellaneous expenses related to graduate study. As a doctoral student, I have utilized a generous tuition subsidy provided to employees at the university where I work. I have continued to work full time throughout the duration of my doctoral program because I cannot afford to take time away from continued employment to pursue even further education.

In addition, I have worked as an academic adviser for over 15 years and have witnessed first-hand the struggles of many low-income students as they attempt to persist in college. There have been numerous times where students have had to stop out and had their classes canceled because they owe money to the institution. Many times this can be a relatively small amount, sometimes as little as $200, but the student has no additional family resources or other avenues for securing those funds. In the office where I work, the secretary has given money to low-income students when they needed money for a course fee or to pay a small amount of a tuition balance so they could register for their last class to graduate. I have seen some low-income students try to remain with an educational plan, such as engineering or business, because they believe it will provide them with a well-paying job, even though they are not being academically successful in those courses. I have had low-income students who work an absurd number of hours in order to pay for school and living expenses. I have had low-income students with

tremendous family obligations. These obligations leave very little time for actually

studying and attending classes. The life circumstances that many of these low-income

students face are truly overwhelming at times and difficult for others to comprehend

unless they have been in a similar situation themselves.

Chapter 4: Case Study Setting and Research Subjects

Study Setting

University of Midwest (U of M) is a large urban doctoral-granting institution with very high research activity. It is located in the Midwestern United States. The U of M's mascot is the Muskie. Undergraduate education at U of M is divided among seven freshmen-admitting undergraduate colleges.[3] The 21 student participants represent six of the seven freshmen-admitting colleges and are approximately distributed among them in percentages that are roughly analogous to the overall undergraduate population at the U of M. Ten students were from Liberal Arts, three from Engineering, three from Business, two from Education, two from Life Sciences, and one from the Agriculture college. There were no students from the Design Arts College.

Demographics of the Sample

As evidenced in Table 2, the 21 students in the sample represented a wide-array of low-income students that attended the study institution. There was an almost even gender mix of 10 male students and 11 female students. Twelve of the students were students of color and 15 of the students were first-generation college students, defined as neither parent has a bachelor's degree. Two of the students listed as first-generation have parents with either some college or an associate's degree but most of the other first-generation students were the first ones in their family, even if they had older siblings, to pursue a bachelor's degree.

Many of the students performed very well in high school. Thirteen had high school GPAs above 3.75 (four had 4.0 GPAs) and the remaining students reported high school GPAs of at least 3.4 (three students did not report a high school GPA). Eleven of the students were in the top ten percent; three of them were high school valedictorians. Four of the students were admitted via a "conditional admit" program called Post-Secondary Excellence, which provides greater support for under-prepared students, but

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[3] Two other colleges at the U of M also grant at least one undergraduate degree, but they are not freshmen-admitting and together they enroll less than three percent of the undergraduates.

Table 2

Characteristics of Participants

Student	College	Gender	Student of Color	First Generation	ACT	H.S. GPA	Loans
Adrian	Engineering	Male	Yes	No	27	3.75	$25,000
Carrie	Liberal Arts	Female	No	Yes	24	NA	$23,000
Devi	Liberal Arts	Male	Yes	Yes	26	3.75	$5,000
Earl	Education	Male	No	Yes	21	3.60	$1,000
Fiona	Business	Female	No	No	30	3.87	$823
Gloria	Agriculture	Female	No	Yes	25	3.90	$40,000
Hank	Education	Male	Yes	Yes	24	3.85	$12,000
Jacques	Liberal Arts	Male	No	Yes	31	3.50	$43,000
Jenny	Life Sciences	Female	No	Yes	30	4.00	$40,000
Lee-Lee	Life Sciences	Female	Yes	Yes	26	3.90	$2,000
Leah	Liberal Arts	Female	Yes	Yes	26	3.90	$10,000
Makeda	Liberal Arts	Female	Yes	Yes	18	3.80	$1,600
Patrice	Liberal Arts	Female	No	Yes	23	NA	$30,000
Reese	Liberal Arts	Female	No	Yes	26	3.90	$25,000
Saulo	Engineering	Male	Yes	No	27	4.00#	$0
Serena	Business	Female	Yes	No	26	3.40	$31,500
Sheldon	Engineering	Male	No	Yes	31	4.00#	$77,000
Suresh	Liberal Arts	Male	Yes	No	31	NA	$35,000
Tariq	Business	Male	Yes	No	30	3.50	$24,000
Yasir	Liberal Arts	Male	Yes	Yes	NA	3.42	$10,000
Yvette	Liberal Arts	Female	Yes	Yes	26	4.00#	$8,000

Note. #Student was High School Valedictorian; NA = Some students did not have or know their ACT score or H.S. rank.

requires specific courses for at least their first year. Their college preparation as measured by ACT scores illustrated a more varied picture of preparation. Nine of the students had ACT scores of 25-27, which was approximately the study institution's average for incoming first-year students in 2008. Six students had elevated scores of 30 or 31. Three students had just slightly lower than average scores of 23-24 and two students had significantly lower scores of 18-21. One student did not know his ACT score.

Introduction of the Students

By the nature of the study, these students were mostly successful, however, when the reader understands the circumstances through which these students achieved such tremendous success, their stories become truly remarkable. Eighteen of the 21 students graduated in four years or just slightly over four years. Of the remaining three students, one was on a five-year track, one was on a six-year track, and only one student had an uncertain future in relation to baccalaureate degree completion. Almost all of the students in this study experienced substantial challenges and moments of struggle, yet they were able to persevere and overcome those obstacles on their path toward baccalaureate degree attainment.

This chapter includes a brief introduction of each of the students in this study. I included some personal and demographic information for each student so the reader can gain an appreciation for the diverse nature of the students in the study. I also included some information about their experience as a low-income college student, including an initial quotation from each student that captures a bit of their character or experience. These quotations and pieces of information are intended to allow the reader to gain a

more nuanced understanding of the students in the study and garner an appreciation for

the voices that form the results of the study.

Adrian graduated in Spring 2012 with a major in civil engineering from the

Engineering College. He identifies as African-American and his father has a Master's

degree. He has already accepted a job offer from an engineering firm where he will be a

materials tester for a light rail project. Of the students in the study, Adrian had the most

nuanced understanding of the expenses that go into a college education and the historical

economics of higher education. He indicated that he knew quite a few students who had

to drop out of college because they could not afford the tuition in order to continue.

Adrian believed that the campus attempted to support diversity but in some areas or

majors, the very low numbers make that challenging:

> Well, I wouldn't say they don't support diversity because I do see that they try. I
> do see sometimes that it's a little low, especially in my major or other engineering
> fields. I mean for my year, I'm the only African American student in all of my
> classes. So I when you see that, it's hard to see that there's diversity on campus.
> But I'm assuming if you go to a different major, you would find more, hopefully
> more than one. But, yeah, in my year, there's just me. And there's one woman in
> the year beneath me, and I have not seen any sophomores or freshmen. There may
> be some, but I would only see them if they were in the building. I can tell you,
> zero Hispanics, if you're willing to go to just gender base, very few women. It's
> mainly like White or Asian men in the program. It does seem a little like I'm the
> only one. I've had that thought, especially in a physics hall of like 400 people that
> hall holds when it's full, and to say, "Oh. Really. Only two of us. Like, wow.
> Okay." It is kind of like disconnecting to some extent, but you just get through
> that part I guess.

Carrie graduated Spring 2012 with a double major in Global Studies and Spanish

Studies from the Liberal Arts College. She identifies as Caucasian and is a first-

generation college student. She is one of several students in the sample who was admitted

to the Post-Secondary Excellence program. The Post-Secondary Excellence program was

created to provide additional academic guidance and support to students who were academically less-prepared than the overall admitted class. Her attitude towards the cost of college exemplifies the attitude of many students: "I don't think I'll ever be satisfied with costs. I understand there needs to be a cost and we should have to pay, but at the same time I feel like people should have support."

Now Carrie is pursuing a Master's degree and teaching licensure program in Teaching Second Languages and Cultures as well English as a Second Language. She has traveled abroad several times and completed a prestigious program abroad in international development during her sophomore year. She has done a lot of volunteering through the YMCA and a lot of tutoring and teaching ESL, especially in Latino communities. An experience on a high school trip abroad triggered her decision to study Spanish which led her to eventually pursuing teaching second languages and ESL:

> So I knew I wanted to pursue Spanish because I wanted to go back, and I wanted to engage with the culture more in their language. There was a time when I studied abroad in the Rotary Club when a man came up to me, and he goes, "How come you can't speak Spanish, and all these German students can?" And that really affected me, and ever since then I really wanted to push for the language and show like, "Hey. I've never had this, but if I study it, I can learn it."

Devi graduated in Spring 2012 with a degree in Psychology from the Liberal Arts College. He also completed a certificate in Addiction Studies from the Extension College and graduated with the third-highest GPA of the sample. He is a first-generation college student and identifies as Asian/Cambodian and a member of the GLBT community. Devi has been accepted into a graduate program to become a licensed psychologist and he would like to open a mental health clinic back in Cambodia someday. Devi indicated that paying for college was a major concern and he suggested that students of color may be

acutely sensitive to such cost concerns. Like many students in the sample, Devi worked at

various jobs and internships while in college. Devi pursued internships through his

Addiction Studies certificate that would give him applicable experience for his future

career:

> Some of the involvement absolutely helped my resume. Some of them helped
> give me some ideas of what I'm still missing. And I learned a lot from my
> internship last year…. So it helped solidify my resolution in becoming a therapist
> because of working as an intern at St. Peter's and at Proud Center. I really liked
> working with the counselors there, they were wonderful, happy, kind people, and
> I need more of those people in my life. I had two treatment centers, really diverse
> clientele, population. St. Peter's was more like Catholic, you know, treatment
> center, Twelve Step, and then Proud it's the LGBT community. There is a wide
> range. There are some similarities because at the end of the day, everyone is just
> suffering from dealing with the human conditions and addictions. But then the
> differences lie in the topic that we explore. At St. Peter's it was more hetero-
> normative issues, and then [at Proud Center] it was unique specific clientele
> issues.

Earl was planning to graduate after May-term 2012 with a major in Foundations

of Elementary Education and was intending to start a M.Ed. initial licensure program for

Elementary Education in Fall 2012. He is a first-generation college student who identifies

as Caucasian. He was able to cover most of his expenses with grants, scholarships, and

working while in school. His father and his brother also made substantial contributions to

pay for his education. Earl explained how his undergraduate courses in teaching

practicum helped him plan for his future as a teacher:

> These practicum courses, they involved me going into a classroom and teaching
> which I'm taking a few of them right now, and I've had one in the past. Being
> able to connect with what I'm actually going to be doing someday was really
> helpful. Learning about what it takes to be a day-to-day teacher and the ups and
> downs of it and getting up early and stuff like that. So the preparation really has
> been helpful to really develop my idea of how to be a teacher.

Fiona planned to graduate in Fall 2012 with majors in Finance and International

Business from the Business College along with a minor in Economics from the Liberal

Arts College. Her mother has a Ph.D. and she identifies as Caucasian. Fiona received

good scholarship and grant packages that covered almost all of her expenses in college.

As a result, she was not as concerned about expenses as the other students in the study.

Fiona had several internships during college and those experiences helped her to discover

what she wants to do for a career:

> I liked non-profit. And I think it was then that I really realized that I didn't want
> to do corporate finance like big, huge organization. I kind of want to keep it small
> scale. That just led me kind of away from corporate finance because at first I
> thought that that's what I would probably want to do, but so then that got me
> thinking. And then I think now I still want to work like in a B Corp. which is like,
> it's a for-profit company, but with their profits they really help the community,
> and it's not, like it's totally for profit, but your profit is doing good, not just like
> increasing salaries and stuff like that.

Gloria is on a slightly longer path toward graduation compared to other students

in the study. She plans to graduate in Spring 2014 with a major in Nutrition, completing

the Didactic Program in Dietetics from the Agricultural College. She indicated that she

would have preferred to take classes in the summer which would have improved her

time-to-degree, but she needed to work more hours in the summer and save money to pay

for school expenses during the academic year. Gloria's longer path to graduation

included starting in the Post-Secondary Excellence program which required specific

initial courses. She did not discover her eventual major until she had been in college for

several semesters and the major is heavily sequenced with many required courses, so

along with her minors, this plan required her to extend her time toward graduation. She is

also completing minors in Spanish from the Liberal Arts College as well as a minor in

Leadership from the Education College. Gloria explained that growing up in a more

diverse environment in Texas prompted her to add her Spanish minor:

> And then I know I picked Spanish because I was born in Texas, and there were a lot of Spanish speaking people there, so I think that's where I first got intrigued by it, and just because it's so, the middle school that I went to was so multi-cultural, and then when I went to high school in Wisconsin, it was 99% Caucasian, so that was a huge difference, and I realize that I love culture, and I love Spanish.

Hui goes by Hank and graduated in Spring 2012 with a major in Business and

Marketing Education from the Education College. He is a first-generation college student

and identifies as Asian. He is ethnically Chinese but grew up in Vietnam until his family

emigrated when he was in the second grade. He is fluent in Vietnamese, Mandarin

Chinese, and English. He began his ESL instruction when his family immigrated to the

United States. He had a lower ACT score and high school rank and was also admitted to

the Post-Secondary Excellence program. Hank had several job offers upon graduation

and was planning to relocate to begin a job as a business analyst for a software company.

Of the students in the study, Hank had some of the greatest family financial

responsibilities, as his mom is a single parent with four children. He was expected to help

pay the bills and support his family while in school. As a result, he had some of the most

substantial challenges around money and hours of paid employment. He worked around

40 hours each week during the school year and 60 or more hours each week during the

summer. His older brother stopped out of college to work full time to help support Hank

and the rest of the family. Thus, Hank is expected contribute to the family even more

significantly after he graduates:

You know, my mom's not a great English speaker. Her income is not high at all. And we do have, you know, averagely roughly about $3,500 to $4,000 of expenses each month for either mortgages, or insurance for cars, food-wise, and, you know, all the other fees and everything like that. So roughly about 3,500 to 4,000. And that was something that I had to contribute every year. Even as a freshman through now. I contribute about maybe $1,000 a month to my family, and that's all from working a lot of hours.

Jacques graduated in Spring 2012 with a major in English and a minor in French from the Liberal Arts College. He is a first-generation college student and identifies as Caucasian. He was one of two students who had the highest ACT scores in the sample. Scholarships covered most of Jacques expenses his first year of college, but he had to work a lot of hours and forego sleep in the subsequent years in order to cover the costs. Jacques was involved in several activities related to art, social justice, the community, sustainability, and international languages and culture. He explained where some of those interests originated:

> I put a lot of energy towards social justice and considering that I'm in an off campus program through [non-profit] right now that is called Urban Arts, and it deals with art in a social justice capacity and how art can be used to inspire that and things like that. So ever since late high school, because my hometown is not a very diverse community, that kind of frustrated me, and it's always something that I've really wanted lately because I like learning other languages and other cultures. So later in high school, I became the president of a group called People for Peace that did a lot of work to raise awareness about things like that. At the time the racial cleansing that was happening in Darfur was a big thing, so we did a lot to like raise money and awareness about that.

Jenny graduated in Spring 2012 with a major in Biology from the Life Sciences College. She identifies as Caucasian and will be starting Dental School in Fall 2012. Although she borrowed $40,000 and considered college to be "overpriced", she still believes she received a much better educational value for the cost compared to her friends who attended private schools. Like many of her peers who were also first-generation and

low-income, she did not have much initial career information and had not thought

critically about her goals. As a result, she initially was pursuing medical school, but

college provided her with an opportunity to examine that choice and decide that dentistry

was a better occupational fit for her:

> I guess when I came into college, I hadn't really thought about it that much. I just came. I was like, "Oh. I want to be a doctor." But once I got here, and I started really thinking about it, I also thought about my personal life and being a doctor is a lot harder to have a set schedule, be there for your family when you want to be there. With dental school, I'm done after four years. I don't have to do any residency or anything, and, I still get to work in the health care field which is really what I wanted to do.

Lan, who goes by Lee-Lee, graduated in Spring 2012 with a major in Biology

from the Life Sciences College. She was contemplating staying an extra year to finish a

major in Asian Languages and Literature (Japanese Emphasis) from the Liberal Arts

College. She is a first-generation college student and identifies as Asian. She was raised

in Hong Kong until age 14 when her family immigrated to the United States. She grew up

learning Cantonese and English but picked up Mandarin on her own by watching

Taiwanese soap operas. She also took some Japanese language classes in high school

which is located in a suburb of the same city as the university. Lee-Lee was able to cover

most of her expenses with grants and scholarships and only took out a loan to pay for

living on campus her first year. In subsequent years, she lived at home and had a job so

she was able to cover her expenses without additional loans. One of Lee-Lee's biggest

cultural transitions was the mixed-gender classrooms she experienced for the first time in

the U.S.

> It was totally different because I went to a Catholic girls' school before I came to America, so like all the people around me is all girls. Even though all instructors,

some after school program or extracurricular activities, they are all one-to-one. It's like all private classes. So the first thing I have to deal with, I have class with guys. I mean like they are super nice in my high school, but it's just different. It's guys. Like the first time, I didn't think about that because they are just human beings, but after awhile I realized that I like to have to kind of treat them differently. I can't treat them as girls or as the same sex. So that's kind of the first thing I have to deal with.

Leah graduated Spring 2012 with a major in Psychology and minors in Mass Communications and Asian Languages and Literature (Hindi/Urdu emphasis) from the Liberal Arts College. She is a first-generation college student who identifies as Lao and Puerto Rican. Leah struggled paying for college because tuition increased each year. She explained that she became increasingly frugal with her money but she still had to work an increasing number of hours in order to cover her bills. She is graduating with the second highest GPA of the students in the sample and one of only two students who had a cumulative college GPA above 3.75. She credits her admission to the U of M, as well as some of her college success, to the adjustments she made when she transferred from a lower-income but more diverse high school to one in a wealthier suburb:

> I got all A's my freshman semester, and I didn't even try really, and so it wasn't very challenging. When I got to [the wealthier suburb], I really had to pick it up, and I cried and I stayed out with the teachers. I cried all the time because I felt like I was stupid, and I felt like all these people are so far ahead of me in terms of what they are learning. When I got to Washington, which is like one of the top schools, I felt like, "Wow. They are very far ahead." They've learned things that I haven't even considered yet in terms of deeper understanding and thinking.

Makeda graduated in Spring 2012 with a Bachelor of Science degree in Child Psychology from the Liberal Arts College. She emigrated from Ethiopia when she was 10 and grew up primarily in the Southern United States. She is a first-generation college student and identifies as Muslim. Makeda noted that the cost of college was high but she

was able to cover her tuition expenses through federal and state financial aid along with

scholarships from the institution and a yearly scholarship she earned as she graduated

from high school. Except during her participation in the Summer Bridge program prior to

her first-year, she lived at home and commuted to school. Makeda reported that the Post-

Secondary Excellence program helped her and other under-prepared and low-income

students increase their chances of being successful in college:

> That program is offered for low-income students, and they know low-income students. They, you know, have a lot of obstacles, so they want to help us. Like I said, I was a first-generation student, and they were there to help us out with everything. They provide a lot of resources.

Makeda would like to attend Medical School now that she has completed her

undergraduate degree. However, of the participants, she had the second-lowest college

GPA, slightly above 2.5 and her previous attempts at the math and science prerequisite

courses were unsuccessful. She had the lowest ACT score of those reported, so even

earning a degree is a huge success. Her first-generation status and recent-immigrant

status are exhibited in her lack of understanding of the post-baccalaureate system in the

United States and her limited career knowledge. Although she has had commendable

success, her comments suggest the need for some continued guidance and support:

> But it's really hard to like find a job that relates to your Child Psych major. One other thing that is frustrating me right now is like looking for a job and having a job set. I applied to a job recently, but they want you to commit to them for a whole year, and they want you to be full time. So, I don't know how that is going to work out with trying to finish my pre-requisites for medical schools.

Patrice is the only student without a graduation date on the horizon. She is a first-

generation college student who identifies as Caucasian. Although she is at the end of her

four years, she encountered some personal difficulties which affected her academics. As a

result, even with 90 credits completed, she currently is not close to completing a degree

and with her academic challenges, it is not clear when she will be able to do so. Increases

in tuition were exacerbating her challenges with her on-going schooling: "Tuition

increases are just killing me, but I keep telling people, I should be going to school at a

discounted rate this year since it's my fifth year, and they're like, 'No. It doesn't work

that way.'"

Patrice was initially admitted to the Education College with plans to do

Elementary Education but discovered that the classroom was not a good fit for her: "I

volunteered in a second grade classroom for two weeks, and it was just crazy. Like the

kids were just out of control, and it was like, 'I can't do this.' Absolutely not." She

transferred to the Liberal Arts College, initially thinking about a History major but

discovered that American Studies was a better match for her. Unfortunately, she had a

challenging beginning when she first matriculated to the university and she never

completely recovered from the rocky start:

> My first semester here, I had a kind of a rough semester because I was
> transitioning from high school to college, and I also moved far away from my
> family, like not that far, but still far enough away that it was a big thing for me.
> And so I had a really rough semester my first semester.

Reese graduated Spring 2012 with a major in Child Psychology from the Liberal

Arts College. She is a first-generation college student who identifies as Caucasian. Reese

explained that she spent a lot of time contemplating the relative worth of attending a large

respected institution, which she wanted to do, with the substantial student loans she

would need to cover her expenses. She was planning to begin a graduate doctoral

program in clinical psychology in Fall 2012 and was concerned about incurring more

loans for graduated school. She wanted to give back to the broader low-income community after completing her doctoral program and she explained how those career plans eased her financial concerns about more loans:

> I had thought about taking a year off just to work, just to get off some of those loans, before I took out even more. But just the whole taking the year off made me nervous, and with going to grad school right away, I'll be able to defer the undergrad ones. A big factor that made me feel more comfortable about taking out more loans was during my interview, they had been talking about programs that for people who work in the health care and psychology field, working in underserved communities after you graduate when you are a licensed psychologist, there's programs that help you pay back your student loans because you're making a lower income working with lower [income] communities. So, knowing that option was there, definitely made it a little easier knowing that I had to take out more.

Saulo is an honors student who graduated from the Engineering College in Spring 2012 with a degree in Biomedical Engineering. He has been accepted to start a Ph.D. program in Biomedical Engineering at a top-ranked university with very high research activity. He was valedictorian in his high school and both his parents have bachelor's degrees. His parents had saved up money for his education, so after financial aid most other college expenses were covered. Saulo only had to work a job to pay for basic living expenses like groceries. His older sister has a Master's degree from the U of M and has helped to connect him with resources on campus. Saulo was very involved on campus and in the community, volunteering, conducting research and running student organizations such as one for Hispanic Engineers:

> I don't pay much attention to it, but I do notice that there are very few Hispanic students here, in the engineering at least. Basically, I was, "where are they? Are they hiding or what?" So just the fact that, "Oh. Okay. Here are some. I've never seen these people before, but now I can meet them." And actually we worked together to get that group back up and running. I was really involved in trying to

get everything set up and recruit people, so that it can continue on now [that] I'm leaving, right? So, it doesn't die out again.

Serena graduated Spring 2012 from the Business College with a double major in Entrepreneurial Management and Accounting. Serena lived on campus her first year, but moved back home and commuted for her three remaining years. She has significant family responsibilities, particularly caring for her younger brother. She identifies as African-American and both of her parents have college degrees. Serena illustrated challenges that some students may face in paying for school when her financial aid package was lowered when she was told she had to file under her mother who lived in the institution's state and not her father who lived on the West Coast. She began college in the Liberal Arts College and was encouraged by her father, who has an MBA in Finance, to apply to the Business College. She started at the U of M with 18 college credits completed while in high school and took summer classes in order to finish her double major in four years. She was graduating with over 150 semester credits, even though only 120 credits are required, because she changed her intended major and the requirements for her double major. She describes herself as very competitive and utilizes that sense of competition to succeed and become involved:

> I'm really competitive, so once I set my mind to get in, I have to get in, and once I got in I made sure to stay involved. So I joined MSBO which is the Multicultural Students in Business Organization, and I was the Outreach Coordinator for that, which got me involved with the Business College culture so to speak, and with other students who had already been in the Business College since I was transferring in.

Sheldon is an honors student who graduated in Spring 2012 with a major in Physics and a minor in Mathematics from the Engineering College. He had the highest

college GPA of all the students in the sample, above 3.8. He is a first-generation college student and identifies as a Caucasian gay male. He was one of two students who had the highest ACT scores in the sample. He was valedictorian of his high school class which was in a small rural farming community in the mid-west. Sheldon is one of only two students in the study who did not receive in-state or reciprocity tuition. He indicated that he relied on loans that his father took out to cover his college expenses. After graduation, he is beginning a Ph.D. program in Physics at a top-ranked research university. When Sheldon first came out, he contemplated taking a break from school:

> I came out as gay to a couple of my friends starting in June last summer and really wanted to just take a year and do personal things, but my parents don't have any clue of that, so it would have been a terrible way of saying, "Oh. Yeah. I want to take a year off of school, and I'm not going to tell you why." So I'm still in school and graduating now and starting grad school in the fall.

Suresh graduated in Spring 2012 with a bachelor of science degree in Economics and a second major in Statistics from the Liberal Arts College. He identifies as South Asian/Indian and although both his parents and older brother have college degrees, he is the first one in his family to go to college outside of India. Although he did high school in India and came here for college, he is not technically considered an international student. He has an aunt in the state who sponsored him for a green card, so he worked for a year at Burger King prior to establishing residency in order to attend college here. He used the money he saved from working at the fast-food restaurant to help pay for his first year. He was heavily dependent on loans and working up to 40 hours a week in subsequent years to cover expenses. His father expects him to complete at least a Master's degree before

returning to India. Suresh enjoyed the diversity of students on campus and it made him

feel welcomed since he did not grow-up in the U.S.:

> Go to [the student union], you know, on third floor or second floor really, just see diversity everywhere. It definitely feels that the U has done so much and there are so many international students and so many non-American students that it feels connected. It's a community where everyone's welcome, and it's not only the Caucasian students that can go to college or anything like that. So definitely it feels like really great campus to meet other people and just not your ethnic group.

Tariq graduated in Spring 2012 with a major in Finance from the Business

College. He identifies as Indian(Asian)-American. Although, Tariq received substantial

financial help from his parents, he was still required to borrow $24,000 in loans to cover

expenses that were not covered by scholarships, grants, or his summer employment

earnings. He had the shortest interview of all the students, at 40 minutes. Many of his

answers were very succinct. Of the students in the study, Tariq portrayed his college

experience as having fewer obstacles and difficulties compared to the other students.

Although Tariq did illustrate the difficulties that can arise when a professor assumes

students have a certain level of prior skill or knowledge:

> I had a financial modeling class which was pretty much a class about knowing Excel. I didn't have a ton of experience with Excel. I had a little bit, but in this class I was just expected to know really complex formulas and things like that. I didn't really know how to use it very well, and the professor for that class never really explained stuff. He just assumed. It was expected that you were sort of an expert in Excel right from the beginning. So I definitely struggled with that throughout the semester.

Yasir plans to graduate in Fall 2012. He needed to stay one extra semester beyond

four years because he is completing three majors from the Liberal Arts College: Political

Science, African/African-American Studies, and Sociology of Law, Criminology, and

Deviance. Yasir was the only student who was noticeably older than traditional-aged

college students. He had immigrated to the United States about seven years ago. He was

born in Ethiopia and spent much of his life in Kenya. He identifies as a Pan-African

Muslim. He is a first-generation college student and says he resists some of the

communal obligations that are typically expected of many immigrants especially from his

cultural background and that has helped him stay driven and focused on the goal of

graduation.

> If you are immigrant and living in the United States, there's a lot of pressure from
> the family, you have a lot of big family responsibility here and back home as well.
> And I kind of resist all that, disconnect myself from all that pressure. I rejected all
> that because if you have these immigrant families, there's always connection back
> home and here that you have to do something related with the family, and you
> don't have this idea of American individualism. Americans are defined by the
> idea of individualism. But we as an immigrant, we always remain communal, and
> we work together with all this. But I kind of break that, so I break away from that,
> and then they give up on me which is too bad and good as well. So I think that is
> what drove me with all this energy.

After graduation, Yasir is planning to pursue a Ph.D. in African Development or he is

considering going to law school. Like several of the students in the study, Yasir noted

that his scholarships and financial aid was very good his first year, but he had to work

many hours to cover his expenses in subsequent years.

Yvette is staying one additional year and graduating in Spring 2013 so she can

complete her double major in Anthropology and Spanish Studies from the Liberal Arts

College. She identifies as African-American and is a first-generation college student.

Yvette had the longest interview of all the students at 124 minutes. Like many of the

students, she has already had an extraordinary life with many great stories to share. She

was her high school valedictorian even thought she was working about 40 hours each

week and practically supporting herself. She received numerous scholarships to attend

college and generously turned down a prestigious scholarship for low-income students so

her friend could have it:

> I had won the scholarship, but I had another one of my friends at my high school, his mom was a single parent, but according to FAFSA rules, she made a lot and so he had a deficit of like 16,000 in loans that he is going to have to take out. The U had given me my financial report by then, and so I saw that I would pretty much be good, and so I just decided to turn the [scholarship] down and give it to my friend just because he had applied for it too. He was like the runner up, and so I was like, "I should be fine," and it all worked out.

Even with her numerous scholarships, Yvette still had some difficulty financing

her college education. Some of the financial difficulties stemmed from previous familial

issues. Yvette had one of the more-challenging home-life situations of the participants in

the study. Her father was not involved in her life and her mother, who only made it to the

ninth grade, alternated between abusive and absent. Her mother kicked her out of the

house as soon as she graduated from high school, but she did get some familial support

from an older sister.

As evidenced by the information and quotations included in this chapter, the low-

income students in this study come from a diversity backgrounds and experiences. They

all faced numerous challenges, and yet, overall, were remarkably resilient, resourceful,

and successful. Many of them had already embarked on a journey toward a very

promising future filled with enormous potential.

Chapter 5

Results

Applying my Persistence Pyramid framework as a lens to explore which factors were most salient for low-income students' perspectives on their persistence yielded a plethora of intriguing results. All of the areas of the pyramid appear relevant to most of the 21 students in the sample on their path to baccalaureate degree attainment, but some areas and sub-themes emerged as particularly salient in their impact on students' ability to persist. Throughout the document I used particular words to convey the approximate number of students that indicated a particular experience or participated in a particular activity (couple = 2, few = 3-4, several = 5-9, many = 10-14, most = 15-18, almost all = 19-20, all=21). Other than cases where I was certain of a particular number (e.g., the number of students who were first-generation), I chose to use words rather than numbers to emphasize that other students in the sample may have experienced a particular theme or activity but they did not recall that particular experience at the time of the interview or they did not deem that experience as relevant enough to their persistence experience to include it in the context of the discussion about their path to degree attainment.

The extent to which various factors affected other factors also became evident. Many of the factors interacted positively to enhance other factors and increase the perceived likelihood of persistence. Similarly, several factors interacted negatively to create greater challenges for persistence. Table 1 (see page 72) displays the numerical distribution of codes in each of the eight areas and in each of the themes. However, this quantitative representation does not reflect the qualitative experience and saliency of the

various themes and persistence factors, which was the purpose of this study. I provided numerous opportunities for the students to convey which factors were the most salient on their path toward degree attainment. My analysis also provided clear clues as to which factors were most important and relevant to the experience of these low-income students.

Student Factors

The conceptual framework that I created, the Persistence Pyramid, contains four student areas of persistence factors that align with various assets and challenges that students bring to campus and continue to develop and work through during their college career. These four student areas include: (a) economic, (b) social, (c) psychological, and (d) academic factors. The low-income students in this study come from a variety of family and social backgrounds and have differing levels of academic preparation, motivation, career plans, and familial support. Although all of them were low-income, as defined by receiving a Pell Grant, within this grouping there were still some economic and social class differences that emerged and were particularly evident in the student factors. The degree to which various economic factors affected the student's path to persistence varied from student to student. For example, some students had to work more hours at paid employment and some students had greater family obligations. As a result, each of the four student factor areas in the Persistence Pyramid had themes of persistence that emerged as particularly salient to this group of low-income students.

Economic

One of the four student factor areas in the Persistence Pyramid is economic. Under the umbrella area of economic, six themes emerged as particularly relevant to the

students' perception of their persistence: (a) costs, (b) jobs and internships, (c) time-management, (d) living on/off campus, (e) commuting, and (f) cultural capital of first-generation students. Several of the themes had one or more sub-themes. The costs theme was the most relevant factor in the economic area. This theme includes the actual tuition costs, as well as all other associated costs involved in attending college and financial aid. The costs them included five subthemes that emerged as having a noticeable impact on students persistence: (a) Pell Grants, (b) related expenses, (c) tough choices related to costs, (d) loans, and (e) benefits connected to the cost of education. The jobs and internships theme had two sub-themes emerge, negative effects and positive effects. The time-management theme had one sub-theme related to family and other obligations.

Economic: costs.

The first theme under the economic umbrella primarily revolved around costs of attendance and the related decisions that low-income students were forced to make in relation to those costs. Not surprisingly, the overarching theme of economic had at least some impact on all of the lives of the low-income college students in this sample. Paying for college is a concern of most students. As the cost of college continues to increase, those concerns are heightened and threaten to keep some students, especially low-income students, from attending at all. The concerns connected to the economic theme appeared to affect almost all of the other theme areas (e.g., choice of major, career plans, campus involvement, and utilization of tutoring and related resources), at least for some students. The economic theme related to costs appeared to have the greatest overall potential for negative impact on persistence compared to all other themes. Several of the students in

the study were extremely concerned about the cost of attendance and the associated costs

involved with attending college. Some of them questioned whether they should

matriculate in the first place, due to cost, and some of them had moments during their

four years when they questioned if they could afford to continue. Devi expressed the

concerns he had in high school as well as the concerns of his friends and their ability to

attend college due to cost:

> It's expensive. It was a worry for me coming in because I'm like, "How am I going to pay for this?" I'm moving far away from home. I'm not staying with my sisters anymore. They're not going to buy me food anymore. I have to find things for myself. So yeah, it's a part of the problem, I think that keeps minority students like me from going to college. Because I remember talking to my high school friends who were Somali, and who were of other ethnic races, and they were worried about paying for college.

> Reese also questioned whether she could afford to attend college and if her

particular choice of university would be worth the debt-burden that she was

accumulating:

> I think it definitely impacts whether people choose to attend or not. It can be a big factor and definitely because personally I had to take out a lot of student loans to come here, so I had to think about if all those loans were worth it to come to such a big university.

Adrian noted that he had friends who were not able to persist due to cost and how

unrealistic the costs are for some students and their families:

> I actually know of a lot of people who had to drop out, not because the coursework was too hard for them or because they just didn't like it anymore, but because they could not afford to pay that tuition bill. Like I was telling you, for an out-of-state student to attend the University this year, the estimated cost of attendance was $28,000 and some change. I mean, that's a lot of money for someone to come up with, and like especially with the recession that's going on right now.

For many students in the study, costs affect not only the decision to attend, but also the decision on *which* institution they will attend. For these low-income students, where they attend can be greatly influenced by the financial aid packages they are able to receive. Lee-Lee expressed the dominance of the total cost factor in her choice of college:

> I mean, of course, this is not the only college that I applied to, and I got acceptances from other colleges from other states, but the reason I chose this one is because I got the most financial help. I paid less than 500 bucks every semester except the last one because the government cut the budget, something like that. So that's the most important, like the first reason I chose to come here.

Nineteen of the 21 students in the sample were in-state students or from a state that had a tuition reciprocity agreement with the institution's state. For many low-income students, going to an out-of-state school without a reciprocity agreement was not feasible. Sheldon, the one such student in the sample, almost had to transfer due to tuition increases:

> It's been expensive. [My home state] doesn't have reciprocity with any other state, so I get full out-of-state tuition, I have to pay, and a lot of scholarships at the lower division level are [reserved for in-state students]. So the second year was a bit of a scare. They had a scare where the University was short on money, and they were afraid that that they were going to have to raise tuition like almost 10% or something. And at that point I was considering, if it raises 10%, I might be transferring out and going back to a [home state] college because it's just cheaper to go to [home state] State in the first place. Plus I'd have in-state tuition, so the two would have been a lot easier. But they managed to keep it like a 3% raise, and as long as I got into that third year, transferring wasn't really an option anymore because after a certain point, it just became infeasible to ever think about moving.

Several of the students suggested starting at a community college as a practical consideration, especially for low-income students. Even though these students had the experience of starting as a first-year student at a four-year university, several of them suggested that some low-income students may choose to start at a community college,

primarily for financial reasons. Sheldon noted that for some programs it may be a wise

choice to start at a community college:

> If you know what you want to go for, it doesn't make sense to go to a four-year
> institution just because it's a four-year institution, if there is a community college
> that can actually serve what you want better. [I] had a decent number of credits
> already done, so I didn't need as many gen. eds. to be fulfilled, but if you come in
> with none, gen. eds. at a community college are definitely a whole lot cheaper
> than they are here. So I think community colleges, technical schools, they are
> somewhat underrated.

Leah indicated that cost prevents some low-income students from having the option of

starting at a four-year institution:

> I think a lot of the students here made it here because they had the money to be
> here, and there's lots of people that I know that are smart enough but have to start
> at community college because they can't afford it.

> Several students noted that they chose to begin at a four-year institution because

their intended programs required starting at a four-year school that offered that degree, or

they received scholarships and financial aid packages that allowed for matriculation at a

four-year institution. In addition, a few of the students mentioned that they wanted to

have that experiencing of "going to college" by attending a four-year institution. Hank

noted that he had relatives that had saved money by starting at a community college but

also was able to articulate the added benefits and value that he gained from attending a

four-year institution:

> You know, tuition is definitely much higher than what the community college
> offers, because I do have family members who went to community college. They
> would transfer similar or most of the credits through the University and save a
> huge chunk of money, and much more flexible time, too. But I think the
> experience at the University and what you pay for is definitely worth it. You
> know, being here on this campus, I really like the facility. I really like the
> environment; getting a chance to meet various types of groups of people [and]
> able to join many social groups. So I think the experience that you are paying for

the tuition is very fun because I do enjoy going to the football game and everything like that. But for academic-wise, I think for somebody who [is] only focus[ing] on academics and not really the experience of college, community college is definitely a better way. You save much more money and able to transfer all those credits through a university and finish the last year or two. You will still get that same credential, that same bachelor's degree.

Many of the students had at least some appreciation for all that goes into the price of college and understand the complexities of the financing involved. Adrian was able to illustrate a fairly nuanced understanding of the financial challenges facing universities:

> I understand the cost of it. I mean, part of attracting people is you have to have a sports team and the new stadium over here. Your campus has to look nice which I think the U does a very good job of, and it has to be feasible. You want to have more than one building. You want to keep the appearance of the buildings up, and you want to have activities for the students to do, so it's not just go to school, come home, do homework, sleep, repeat the next day. You want to have some events for the students, so I understand the reason why college can be a bit pricey.

Economic: costs: Pell Grant.

As noted earlier, all of the students in the sample were selected because they received the Pell Grant. Several of the students mentioned specifically how important the Pell Grant was in terms of their overall financial aid and their ability to attend and persist. Fiona indicated that for her first few years, she had to fund her college education completely on her own. With scholarships and the Pell Grant, she was able to cover tuition expenses and paid employment covered the remaining costs, but without the Pell Grant, it would not have been possible. Similarly, Leah explained that if it were not for the Pell Grant, a college education would have been out of her reach:

> The Pell Grant was probably the most beneficial, like benefited me the most, because if it wasn't there, I wouldn't be here, because that much money is just not easy to come by. And I don't think I'd risk wanting to take out that much in loans, especially because my family, like my dad, has his mortgage loans and everything like that, so it's not like something I could get signed very easily anyway. So I

think the Pell Grant helps tremendously, and even if like other grants weren't there, I think I could have managed. And those were nice to have too, like the state grant and everything, but I could have at least managed. But without the Pell Grant it wouldn't have happened.

Several students mentioned how challenging it is for low-income students to finance their college education. Adrian believed that low-income students were under attack politically and that it would continue to become increasingly difficult for them to finance a college education. He was aware of the congressional debate over maintaining the funding for the Pell Grant and the implications it would have for low-income students:

> I mean I heard talks last year, especially around this time, that the Senate was trying, or Congress was trying to pass a law to get rid of the Pell Grant. The Pell Grant is only offered to underprivileged students. It was an obvious attack on them. And it wasn't like it was truly hurting them [Congress] that much. It was just because "I can't get it, why should you?" I do believe with this attack, it really is just taking it away from the land of opportunities to the land of "if you are rich, you have your opportunity".

Economic: costs: related expenses.

Thanks to the Pell Grant, along with other grants and scholarships, many of the low-income students had most, if not all, of their tuition covered. Even though students had much of their tuition expenses covered, they still struggled to pay for living expenses, books, and other costs associated with attending college. Leah noted some of these other costs:

> Tuition was pretty much covered by loans or grants, but then the books weren't, and the rent wasn't, and the transportation wasn't, and the food wasn't. So it was very expensive in terms of all those other things, but not tuition itself.

Yvette also mentioned how those additional expenses are difficult for low-income students who may not get any financial help for their parents:

I feel like being low income, you know, being able to qualify for the Pell Grant, usually helps out with the cost of tuition at least. So that's very nice, but tuition sometimes just is not enough. You do need money to live and with the weight of school, it really is hard to like work and be able to like survive. Even though the FAFSA goes by your parent's income, the reality is that most students don't get their parent's income.

Makeda discussed that even relatively small expenses, like textbooks, can be such an overwhelming expense for low-income students that some students will simply not buy the required texts or find other means of reading the material:

Books. Yeah. They're expensive. Like a semester it's $500. So sometimes thinking about "should I skip on these books or, you know, borrow it from a friend?" But then if you borrow it from a friend, you can't have it whenever you want. Or like the library, I don't think they let you have it for the whole semester. Yeah. It's a challenge, so I know about that. So I guess buying your book supplies is a challenge too, if you don't have a lot of money.

Makeda mentioned that she was occasionally helped by considerate professors who gave her copies of the required texts:

There are some professors who provide books, like my freshman year, I know the professor [did]. It was a seminar, and I was like the only Black person in class, so he didn't do it to other students. Just because I was Black, he automatically thought, "Oh, you know, she can't afford books." I mean, I didn't think of it as offensive, but he provided me with free books.

As nice as that gesture may have been, Makeda clearly perceived racial overtones accompanying the gift.

Unexpected expenses also presented real challenges for these low-income students and forced them to make difficult choices in terms of which items they really needed and which items were worth spending their limited resources. Jenny noted some expenses that wealthier students may take for granted but forced her to confront those tough decisions:

I mean my laptop broke junior year. I had to buy a new one and your financial aid doesn't really factor something like that. And then, I guess it's not necessarily a college expense, but applying for dental school is really expensive. And I took a Kaplan class, so that stuff I all had paid for myself. My parents didn't, so that was always kind of a burden to have that kind of stuff, but I made those choices, you know. I didn't need to buy a new computer, and I didn't need to take a Kaplan class to study for my DAT, but those were big expenses that I chose.

Economic: costs: tough choices.

The aforementioned additional expenses made some students make decisions that greatly shaped their educational experience. For example, one summer Yvette took classes just so she would have financial aid money to pay her rent, even though she knew this meant additional loans that she would have to pay later:

> Last summer probably the only reason why I took summer classes was because I wasn't going to make enough money on my job to afford rent. So I was like I might as well take summer classes because otherwise I'm not going to be able to pay rent. I had to make those decisions even though obviously, summer classes, that's like 6,000 in financial aid, and that's going to be loans. "Do you really want to do that?" That's in loans, but well, what am I going to do this summer because I don't have any money?

Some students talked about making decisions due to their financial situations that affected their college experience. Several students indicated that they were not able to be involved with some engagement activities or participate in certain events with their middle- and higher-income friends. Sheldon discussed how he missed out on certain social activities or other opportunities due to the costs involved:

> I have to learn to be really, really frugal. I sometimes kind of sacrifice not doing things because I can't afford the cost. Ideally it would be more fun to probably to go to movies more often or go out to nicer restaurants, but [I] can't afford to do that very often, so usually it's like my birthday, and I'll make an excuse to do it. And then, like right now, I have some friends who want to take a road trip after graduation some time in June to like camping in the mountains and then go on to Seattle, and I'm looking at it, it's like, "I'm out of money. Like I'm not sure I can afford this trip." I'd love to do it, but the money is a kind of a limiting factor. I

always make sure there I devote enough to have for academic things, but it's just the social things that kind of get sacrificed when you have to put all of your money towards schooling. It's definitely affected things. I guess I try not to let it affect too many things. I try to find more free things or cheap things to do.

Leah complained about some of the negative effects on housing choices and social activities because of her lack of financial resources while in college:

Of course because I lived in crappy places, and my food was very crappy, and everything was very, you know, books were used, and books were sometimes not bought, and I just borrowed books from like my psychology friends. I couldn't do certain things I wanted to do, like go out with friends, because I didn't have any money or because I had to pay rent. So social life was a little bit hindered by financial obligation.

Where the students chose to live affected over half of the participants as they attempted to reduce living expenses as much as possible. Most of this half chose to live off campus, at home, with other relatives, with friends, or a significant-other, in order to reduce costs. Several of them would have preferred to live on campus or in a fraternity or sorority house, but could not afford the expense. Makeda had the opportunity to live with a friend rather than farther away from campus with her family, but she could not afford it:

A friend of mine asked me like to live with her in an apartment, and she was like "$500." And I was like, "No. I can't afford that." Because commuting is really hard when you live in [a suburb farther from campus]. If you live 10 minutes away, it's really easy, so I thought about living in an apartment with a friend, but it's too expensive.

Serena had a similar experience when her sister convinced her to move back home in order to save money, but she regretted the unexpected costs of additional family responsibilities and time away from school and educational activities:

And then sophomore [year] when my sister was a senior, she's like, "Oh. I'm going to move home. You should move home too." And I was like, "Oh. Okay. Save money; move home." And then once I got home like, "Oh. It would be so much—it's so much easier to live on campus." You know what I mean, because it

adds a whole 'nother element when you put family into the mix when you move back home.

Social activities and housing options were not the only areas that were negatively affected for some students because of their finances. Many of them worked a lot of hours in order to pay for school, living expenses, or family needs. For Hank, the financial situation also affected the number of credits Hank took each term: "I took a lot of credits because I want to graduate early and/or on time. And I worked a lot because of the financial situation." High credit loads along with working many hours can result in students being placed on academic probation or suspension, so the situation puts them in a precarious position. Adrian implored universities to help students financially if they want them to be academically successful:

> Some students, not just myself, but a lot of students that I know of, can't study the amount that they need to because they have to find another job to pay for school. If you want your students to give their best shot for it, you need to help them financially. You need to make sure that they can afford to come to school and not just off of loans because with loans there's still the added thing in the back of their mind, "Okay, I have to pay these off. I still have to pay these off. I need to get a job anyway." I'm not saying don't have them work at all because they should have to help a little bit, but at least put like a debt cut-off per year.

For some of the students, their family financial situation put considerable pressure on them in terms of time, works hours, and financial responsibilities. Also some of the students had financial obligations to help out their family financially while they were going to school, and this had a detrimental impact on their ability to fully engage in college. When the students' families experienced financial difficulties, the students may be the only ones who are able to help out the family. This additional stress and need to work additional hours to support the family can negatively impact the students' ability to

study and be academically successful. So in addition to all the expenses related to attending college, they also had to come up with money to help their family. Typically, this was achieved by working a large number of hours, which distracted them from their primary goal of college engagement and degree attainment. Of these students, Hank had the most severe financial obligations and he was quite disappointed about the college experiences that he missed because of these obligations:

> I think the work that I put in, all the work, the monies that [I got] back, was not really for school, because school was all paid for. It was mainly for taking care of the family. I contribute about maybe $1,000 a month to my family, and that's all from working a lot of hours. So it did impact me a lot because I didn't get the full experience at university. I wanted to stay on campus. I wanted to be able to go out late at night with friends, or just living in the dorm experience and, you know, [be] able to make friends and get a chance to live with roommates.

Even those students who received some financial assistance from their family still had obligations to work and earn a certain amount of money. The low-income students needed to minimize any school-related expenses that would add a further burden on the families' already-stressed financial situation. Jacques explained the pressure he experienced to pay for as much as he could:

> I was very fortunate my freshman year to pay almost all of it with scholarships, and the rest of it, my parents were always willing to help, but it was always kind of understood that I would also be working. I would be making money, and I would be paying for as much as I could. So that was stressful at times. The semester with Spanish [difficulties], that was definitely a factor where I had a financial situation that I was like, "I need to work *all* the time. All of the hours, I need to be working."

Low-income students may encounter a challenging bureaucratic system when attempting to pay for school amid complex family dynamics and financial situations. Yvette was able to remove herself from a bad family situation and the financial hardships

that were connected to living with her mother. However, as she attempted to pay for

school and live on her own, she ran into difficulties even filling out the FASFA to request

financial aid. She tried to live independently after her mother kicked her out of her house,

but she could not get her mother's tax information to file for the financial aid:

> That was really difficult and very stressful because I felt like I really started to see that the system is not designed for certain people because the issue was that I had to do this independent status appeal because I didn't have my mom's tax information. On the appeal it says "These are not reasons for an appeal" like "you can't obtain your parents' tax information." It clearly says that's not a reason for me to [appeal]. At that point, I felt like there was nothing [I could do]. How am I going to go to college next year? The Pell Grant, that's so much of the money that I use for school, and then in order to get the [remaining] Free tuition [scholarship], I have to get the Pell Grant, and I can't even finish my FAFSA right now.

Economic: costs: loans.

Even though the low-income students received Pell Grants and most had

additional scholarships or grants, as well as hours of paid employment, many of them still

accumulated vast amounts of loans. (See Table 2 on page 79 for the amount of loans each

student had incurred by the time of the interview.) Although a few left with only a few

thousand dollars in loans, several had maxed out the amount of loan they could take

through the federal government and supplemented that with additional personal loans.

These personal loans often have higher interest rates and this level of debt would be

nearly impossible for these individuals and their families to pay back. Unless the student

is able to get a very high paying job, they are likely to be saddled with an insurmountable

debt burden that cannot be discharged even in bankruptcy.

One of the students graduated with no loan debt and four students are graduating

with $500 – $2,000 in loans. The remaining 16 students ranged in loan amounts of

$5,000-$77,000, averaging around $27,500. Sheldon, the one out-of-state, non-

reciprocity student had maxed out his federal loans and borrowed an additional $50,000

of private loans through his father. Adrian translated these extreme costs and loan debts

into a context that has implications for the nation:

> It's pretty sad when the student debt exceeds the credit card debt in the country. I mean everyone tells you, "Pursue the American dream," and the American dream does include going to college, but the one thing they don't tell you how to deal with is, "I want you to give me a few dollars so I can get there." And everyone's like, "Well, we can't give you that." It's just like, "You have to do that."

Adrian was able to have some levity about the situation by reflecting on an editorial

cartoon he had seen recently in the campus newspaper:

> A guy just graduated from college and he's moving back in with his parents and his parents are saying how, "Gosh, why can't you do this on your own? Like back when we graduated from college, we had nothing." And the kid on his back has credit card debt that's breaking his back, and it's like $50,000 in credit card debt, and he says to himself, "I wish I started off at zero. Zero I can do."

Economic: costs: positive influences.

One unexpected positive influence on persistence related to the steep costs

associated with college for these low-income students was that several of them felt

pressure to remain enrolled and graduate in a timely manner since stopping out or taking

longer would increase the overall costs. For Yvette, it was her generous financial aid that

encouraged her to stay enrolled when she wanted to take time off. Although she still had

difficulties paying for all of her expenses, she knew that taking time off would only make

things worse: "I had really no reason to stop because I had come here on a really good

financial aid package, so it would be like throwing it all away. Just taking a year off

wasn't worth it." Sheldon also mentioned that he could not afford to take a break:

I also couldn't really afford to take a year off. When you stop going to school, and all your loans start coming due six months later, and I have no way to pay those. So it wasn't really feasible, but in an ideal world where money wasn't an issue, that might have been a nice option.

For Hank, the financial cost of delaying graduation forced him to pick a major and finish in the four-year time frame since he and his family could not afford for him to stay in school any longer: "Financial was the situation, and time was just running out, and it was running out fast. So I knew I had to choose something so that by the time I graduated, I would be able to find a job." Several other students mentioned how the financial costs were a motivating factor in keeping them focused on their studies since they knew how much this was costing them financially. Reese expressed that the additional loan burden was stressful but kept her on task:

> Well, it definitely raised the stress levels, but I think it made me work harder just because I knew I was doing all this for going to school and for my education. That to waste that would be extremely dumb and irresponsible, but I think that kind of made me work harder knowing that I had to take out these loans.

These low-income students were clearly concerned about the cost of their college education and how they would pay for it. All of them were able to use the Pell Grant and other forms of financial aid to lessen the burden of paying for college, but they still struggled with paying for related expenses. As a result, they had to make tough economic choices and many of them had to incur significant debt through student loans. To compensate for their economic situation, many of these low-income students relied heavily on jobs and internships.

Economic: jobs and internships.

For many low-income students, their financial situation requires that they work while in school. Almost all of the students in the study had jobs or internships through most of their time in school. Some of the students worked full time throughout their college career and sometimes even more in the summer. Trying to juggle school along with a large number of work hours created immense stress for some of the low-income students. The amount of financial stress that Hank experienced while in school was readily apparent as he discussed the need to work as many hours as he possibly could:

> Money is what we struggle on having. I live with a single mom, single parent that's taking care of four kids and without that income from my dad's side, it's very hard. We also have a lot of fees to pay for our house, our mortgage, insurance, you know, all those expenses too, just for everyday living. I actually, throughout all my four years of college, I actually managed to work. There were years that I worked full time, 40 hours. There were years that I worked two jobs, and every summer I had a full time job, two full time jobs actually, that I put in at least 60 hours every summer. So it was very, very hard and very stressful because I knew I was not financially stable, and I needed the money to finish school and then helping out with the family.

Economic: jobs and internships: negative effects.

For many of the students, their jobs and internships required countless hours of work that pulled them away from studying or other educational endeavors. Although they generally derived some positive benefits from working, especially at internships, the time commitments involved also were a significant cost to their academic success. Gloria took responsibility for the fact that her work hours prevented her from studying as much as she should: "I definitely could have studied more if I wasn't working, but I mean, I guess those are the choices you make." Serena talked about taking on too many work hours

because she needed more income to pay for her expenses but the hours and scheduling

became too much and affected her time for school:

> I shouldn't have taken the role of sales lead/Assistant Manager. It was way too much work. I was working like 25 hours most weeks, and so, of course, it's like Friday, Saturday, Sunday, and then I didn't have class on Tuesdays or Thursdays so I had a Monday-Wednesday-Friday school schedule, and I was working Tuesday, Thursday, and then Friday, Saturday, Sunday. Bad idea.

As noted earlier, Hank discussed that so much of his time was consumed with

work that it was difficult to find time for much else. Although the jobs helped his

finances and at least some of the jobs gave him some relevant experience, it is difficult to

say that all of his work hours provided enough gain to justify the huge expense in time

away from school and educational activities:

> Well, coming to the U, I worked at [Big] Bank as a teller. I put about 25 hours there, every week actually. And then I also worked at a small family restaurant, the [Tiger Lily] Restaurants. So being a waiter, server, bartender, I basically every weekend, every night, was putting my time there. I never got a chance to live on campus. I really wanted that, but because of the financial situation and also all the hours that I put in, I could not be doing that. I had to stay at home, come to school, and then go back and work over the weekends.

When tuition goes up, as it inevitably does, the price increases dramatically affect

low-income students who are already struggling to make ends meet. Leah talked about

how she was able to make things work by picking up a second job, but it was always a

psychological burden:

> But it didn't help that the tuition was increased the next semester, and I was like "Oh. How am I going to pay for this?" So I ended up getting a second job and it was just kind of a paycheck to paycheck thing. I never struggled too much in terms of like how I've seen other people struggle, but there was always that extra thing in the back of my mind like, "I need to work these extra hours because I need to be able to pay the rent." Those are the other things that don't factor in to how much tuition is.

Patrice was clearly frustrated with the way that her work hours consumed time that she would have been studying or getting involved on campus. Although she was upset by her circumstances, she approached her reality in very utilitarian terms:

> Well, working, it kind of stinks sometimes because it's like there's three hours of the day that I don't have to study. Or I'm working on Saturday, so I can't go to the football game, but I have to think of it not for the social aspects. I have to think like, "This is how I'm going to eat tonight. This is paying for me to have a roof over my head, to feed myself, to clothe myself, that's what's more important than going to a football game." That's what I tell myself every day, "You don't want to be here, but you have to be. Just suck it up and finish. Finish the day."

As noted, the amount of time that the low-income students spent working came with costs to their academic success, in terms of having time to study and do homework. The students also lost out on time for engagement activities and had to make some programmatic decisions based on their availability of time. Carrie found her work schedule prevented her from engaging in everything she would have liked to do but also realized it was not possible to do everything:

> I don't feel like I have time. I really pack my schedule full and a lot of that is working. I feel like that maybe burdened me or prevented me from engaging with more groups, but there's always going to be that something that prevents you from exploring another area, so it's really hard to experience all of it.

At one point Carrie was working multiple jobs and volunteer activities and it simply became too much and as a result, she decided to drop her ESL minor:

> That was probably the most stressful semester, because I think I was doing about 40 hours a week, plus school. And I was doing my senior thesis that semester. It was just death. That's why I dropped the ESL. It was just like, "I'm not doing that to myself."

For many of these low-income students who were dramatically over-scheduled due to work and other responsibilities, adequate sleep became a common casualty of their

hectic schedules. Jacques indicated that sleep was sacrificed to make room for working

two jobs around 30 hours per week while still attempting to perform at least adequately in

his classes:

> By not sleeping. That was definitely where I was like, "this is going to be rough, but it's got to happen," so I would work as much as possible. I would go to my classes as much as possible, and I would pay attention as well as I could, and I would do the homework to the best of my ability as long as it took. There were a lot of nights where I was getting zero to four hours, and it happened. It wasn't great, but I got through it.

Almost all of the students who had on-campus jobs emphasized how helpful it

was that their employers were flexible and sensitive to the students' educational

priorities. Jacques worked at one of the libraries on campus and noted how supportive his

supervisors were when he needed to alter his work schedule to attend to class-related

projects:

> It was really nice that it was as flexible as it was. So if there was ever a time where I was like, "I need to not come into work. I need to be doing this other thing," it was really easy for me to, email them and say, "I'm not going to be able to come in because I have to do this," and they were always just fine with that.

Several students noted that their on-campus jobs allowed them to schedule work in 2- or

3-hour increments between classes which made it possible for them to go to school and

maintain employment while still leaving time for studying and other activities. Makeda

illustrated that convenience with her on-campus job:

> I can work between my classes because it's so near, and then when I get out of class, if my [next] class is at 3:00 I can still work from 12:00 to 1:00 or 2:00. I can still make it to my class, so it's very convenient to have jobs that are on campus.

Economic: jobs and internships: positive effects.

Although the students' jobs and internships had some adverse effects on the students' ability to be involved and to study, these employment experiences also had various benefits for the low-income students. Some of the positive effects were simple utilitarian benefits such as earning the money to remain enrolled. Other benefits included job experience and self-discipline. Leah claimed that getting a job on campus was one of the main factors in her ability to remain enrolled: "Being able to get a job, a student job on campus, that's flexible; it helps tremendously or else I wouldn't be able to afford anything that college requires in terms of books and transportation and stuff like that." For many of the students, they recognized that their employment at jobs and internships were not only helpful financially, but the jobs also provided them with structure and forced them to organize their time. Fiona indicated that this structure was even more important than the money she received from her employment:

> I think because me getting a job was less about money, even though I did need it. It was a double positive, like I could get money, and I'd have more structure. But so in that sense, it was more about the structure than about needing to pay for school and stuff.

Many students noted the pitfalls of procrastination and attributed much of their success to finding ways to stay on task. Jenny articulated what several students mentioned, that their jobs forced them to learn good time management skills:

> It definitely has taught me time management skills. I think my freshman year, when I didn't have a job, I wasted a lot of time doing nothing. Whereas now I have a set schedule every day, and I've learned to prioritize my work and not put it off till the last minute. I know now that I can't do everything at the last minute, because I work the day before two tests. I don't have time to study for both of them the night before. I think it's something that everyone should experience because all of my roommates that don't work, they have a lot of lazy time that

they just don't do school. They don't do work. They pretty much lay around, so in the real world, you don't really have that choice.

For some students that job or internship very directly helped them remain enrolled and reach the point of graduation. Serena was feeling very unmotivated to stay in school since she had been placed on academic probation and was planning to take a year off to regroup:

> I felt like taking a year off because being on probation kind of stinks because I'm like, "Oh. Failure." But once I realized I knew if I took a year off, or if I took time out, it would be that much harder to come back. And I had an internship at Universal Health Care for the past three summers, so I was trying to figure out, if I took time off, how would I explain to them like, "Well, I'm not in school right now, but I still want the internship."

Gloria was insistent that having a job was one of the most important factors in her remaining successful in school:

> Well, I feel like definitely having a job, it helps to balance things out so you're not studying 24/7, so you have somewhere to like go away and do something else for a little while. I think having a job has kept me sane.

Several of the students discussed the ways that their employment during college assisted them in making future plans for after college. For some it was finding what type of work or type of employer would be best suited for them. In many cases, it allowed them to discover what they did not enjoy, which is often critically important for avoiding lengthy life-delays by heading down a path that may be ill-suited from them. Sheldon recognized that his research job allowed him to rule out one area of focus for his graduate work: "The research job has helped a bit with figuring out that I don't think I want to do space physics for grad school. It's just not my area." For Suresh, one of his campus jobs made him consider some other possibilities for graduate school:

It's mostly hardware stuff, but then the position changed to more software and more development part. So I'm doing PHP Java and stuff like that. So I'm kind of liking it. I'm learning more stuff and my other supervisor's super nice. He's been teaching me more stuff, so that's why I'm thinking maybe I do want to do computer science, though I'm not sure.

Many of the students got direct experience in their college jobs that they will be able to apply in their future careers. For example, during Tariq's internship abroad he was doing banking research that gave him skills to do similar work in the future:

I just did research, for the most part. When a client was looking for a specific person to fill an opening, then I would research people and how well they did in their previous banks or hedge funds and try to come up with a profile to see who might be a good match for the position we were trying to fill.

The students discussed how helpful the jobs were when they related to their future careers or gave them skills that they knew they would need later in life. Carrie mentioned that her work with the YMCA and the skills she gained there helped her in multiple ways:

That was really important to be able to find the YMCA, which not only contributed, it affected all areas of my life: financially, tutoring, education. I was increasing my skills as an educator. It also provided opportunities to move up and network. [The YMCA Director,] she's actually one of my references for my initial teaching licensure program.

Although Devi had to withdraw from some classes his senior year because he was working 40 hours per week at an unpaid internship, he still found the internship extremely helpful in the long-term:

I learned a lot from my internship last year of just trying to be a professional and watching other people counseling, doing paperwork. It explained to me what bureaucracy looks like. So it opens my eyes to what's out there: "What is the likelihood of me obtaining a job? What it's going to be? What am I going to need in order to be competitive? And what kind of people I should be with?"

As helpful as the various jobs were to these low-income students, the vast majority of the job are still low-wage jobs that pale in comparison to the cost of their

schooling. Adrian clearly articulated the discrepancy between the minimum/low-wage

jobs and the cost of tuition now compared to that comparison decades ago:

> For the first two years I worked at the dining hall, and it helps a little bit. That's like little odds and ends things, but $8 an hour is not enough to come anywhere close to paying off your school debt. In fact, I even remember seeing somewhere that back in the 60s, the average student could pay for all of their tuition off of working 6 to 8 hours off of minimum wage. And now if you tried that, you wouldn't even be able to buy a book for college. I mean some of my books cost upwards of $500.

Although the students gained some valuable work experience and learned other

skills at their jobs and internships, these experiences often detracted from their academic

activities. Since they needed to work such large number of hours, many of the students

discovered that they simply were not able to spend as much time on educationally

purposeful activities as they would have preferred.

Economic: time management.

As the low-income students struggled to have enough money and enough time to

work their jobs and internships, as well as participate in college, time became a valuable

resource, almost as valuable as money. Time is money and for the low-income students

who lack financial resources, they also lacked time or had greater constraints on the use

of their time. They were often over-scheduled and lacked flexibility and availability of

time since they had so many work and family obligations.

As a result, almost all the students articulated the need for time management and

how essential it was for their success. Since they were obligated to work many hours or

have other time commitments that consumed an unusually large number of hours, the

students provided detailed illustrations of the development of their time management

skills. Leah declared that her time management skills were probably the greatest factor in

her being academically successful and persisting to the point of graduation:

> I think probably my time management has probably helped me the most because I
> have to work in order to pay for rent and other expenses. So being able to work
> and then find time to do school work, I had to cut out a lot of social time for the
> past four years, which I'm excited to get back.

Earl discussed the importance of making appropriate choices by prioritizing

activities that will lead to academic success over other options. Earl found himself on

academic probation and realized that he needed to make some significant changes in the

choices he was making with his time:

> I think it was just an overhaul of what I was doing. Obviously maybe I partied a
> little too much on the weekend or didn't complete my grades or didn't complete
> my work on time. It was looking back on, "Okay, let's write down a checklist on
> what I can do better. Okay, I did this wrong, this wrong, this wrong, but how can I
> improve it?" So, instead of staying out until 2:00 a.m. on a Friday night, I can take
> that weekend off [from socializing] and get that assignment done and then have a
> good time the next weekend or something like that.

Devi urged future students to know when to cut certain things out of their lives in

order to prioritize and make time for what is most important. He was involved with

student groups and other activities when he reached a point where he realized he could

not continue to do it all, so he had to eliminate his participation in the student groups:

> And you know when to quit when you know what you want. What I want, what's
> on my priority list, was to graduate, to be a therapist. So if I'm overworking
> myself, trying to buff up my resume, and not enjoying my time, not learning,
> feeling like I'm dying, because I have no time, no free time. Then, when you
> know you're killing yourself for no necessary reasons, then you are able to quit
> better and more effectively. And it sounds horrible telling people to quit, but you
> need to know, you need to pick your battle, when to fight, when not to fight.

Saulo illustrated the extreme forms of organization that he needed to employ in order to

manage his time effectively and fit everything in:

A lot of times I had to juggle things around and figure out what to put on the back burner and what to move up front. It's gotten crazier as the years go on. I had a "to do" list, but then I made a "to do" list of my "to do" list for even more important [tasks] and at different levels. I mean it just got insane, kind of, the things I had to do.

Leah recommends that students who begin college without extremely diligent organizational and time management skills should remove almost everything other than school and absolute necessities from their schedule:

So it's best to just put school first, and then there will be time for other things. My freshman and sophomore year were very like school…work. As it's gone on, I've been able to spend more time with friends, go on camping trips, and do other fun things, but it wasn't something that I could do before. You have to be dedicated in the beginning in order to get to that nice balance at the end.

Such advice could be quite difficult for many low-income students to follow when they have jobs and family responsibilities that cannot be eliminated from their schedules.

For students who worked a lot of hours, simply juggling school with multiple jobs became an extreme challenge. Hank illustrated that his work hours alone consumed much of his time: "I basically put 12 hours every day on Friday, Saturday, and Sunday most of the time." On weekdays, he would need to fit in classes, work, studying, and some sleep. He mentioned how terribly sleep-deprived he was and the toll that takes in order to fit everything in:

[On weekdays] getting off work around 10:00, depending on what job it was, so most of my studying time was from 10:00 at night, and I wouldn't go to bed till 2:00 to 3:00 a.m. I would have to wake up around 7:00, go to class, [and] make sure that I get to school by 8:30, 9:00. So sleep was something that I really missed out the last four years. I really, really need some sleep and that's definitely the issue.

Hank's work and family obligations essentially forced him to manage his time effectively. Several students learned those time management skills once they got a job

while in college. Gloria talked about the benefits of having a job, which forced her to be

very diligent with her time:

> That's why I think it helped me keep my sanity because you're like, "Okay. I have four hours to study," so you have to study during that time. You can't lollygag around. I feel since I've had a job, especially compared to my freshman year, I'm definitely more productive, and I do more.

Time management not only affected day-to-day or week-to-week choices, but

some students also made decisions on how they would spend their time that affected a

much longer time frame. Adrian discussed his choices in relation to ensuring a goal for

four-year graduation while other students chose to stay for five or six years in order to be

more involved or take advantage of other opportunities:

> Freshman year I was going to start a fraternity. That was when I, I didn't start it actually. It was just an idea a few guys had. I said, "Sure, I'll join with you guys." But then the classes do get a little bit longer, and your free time gets affected by that. So it does become a little bit harder to do that. I do know a lot of the people who want, especially in my major, who want to finish in four years. They do cut back on a lot of social activities, and for people who would rather do those things, they finish in five or six years. So it all just matters what's more important to you. Do you want to get done in four years, or do you want to do more stuff here on campus and be here a little bit longer?

Economic: time management: family and related obligations.

Although students were forced to manage their time due to overloaded work and

school commitments, several of them had additional time burdens related to family

obligations or other life-events that pulled them away from their schooling. Some of the

students had such significant family obligations that their ability to participate fully in

their higher education was affected negatively. Some had to help with family businesses

and others had to care for younger siblings. Serena was responsible for some of the

parental duties of her younger brother: "If there's school issues, then me and my sister

help my mom take care of that, and so making sure he's getting his homework done. So I feel like I'm a second parent." Serena complained about how the stress of family obligations to help out with her younger brother added to her stressful life and hectic schedule:

> It wasn't easy, especially because I have a little brother too, and my mom works night shift. So, that was another stress factor because it's like, "Okay. Get him to sports. Make sure he's doing well in school." Keep on track with all of that, do my own homework and commute too. So, it's like a lot was going on.

No other students in the sample came remotely close to the extent of family obligations that Hank was experiencing and the degree to which those obligations detracted from his schooling. He had to work many hours to help his family pay bills, which prevented him from taking full advantage of all the opportunities in college. Not only did he have financial obligations, but he had a psychological weight of responsibility that weighed heavily on him and on the choices he was making. He was quite devastated when he was not admitted to the dental therapy program and considered his debt to his family in contemplating his next move:

> After being rejected, I was very sad. I was like, "Gosh. What am I supposed to do now, you know?" I had no major, no career field, nothing, no background of anything that I wanted to do or any experience. I wanted to take some time off, and I wanted to help out my brother and my family because my brother dropped out of college just so that he could help take care of the family. At the same time, I felt really guilty and very disappointed that I was an investment for the family to pursue a career that by the time I graduate, I can make somewhat of an income to take care of the family and provide that same experience for my brother to go back to college and graduate with a bachelor's degree. And so I wanted to do that when I got rejected. I wanted to quit. I talked to the family and told them I was very, very disappointed at myself, very sad, but at the same time, I already put in two years of college. Two more years was what I only had left and was finding something quick to graduate in time. And so I decided on this major, the BME major.

Hank often had to juggle multiple responsibilities and was not always able to make school a top priority. He revealed his thought pattern as he was making decisions balancing work and school and how the emotional weight of his sense of family obligation influenced his decisions and forced him to choose things that detracted from his education but supported his family:

> I could have done the selfish thoughts of, just go to college taking out loans and live on campus, by myself. But at the same time, I'm not supporting the family. It wouldn't be fair for my brother because he did drop out of college and work more than full time just to support the family.

Hank feels guilty about the fact that he has had this opportunity to get a bachelor's degree when his older brother had to drop-out of school in order to support the family. Even though Hank plans to support the family and allow his brother to go back to school once he starts his career, he acknowledges that it will not be the same for his brother:

> There was jealousy in him that he wanted the same exact experience: able to go to college, get a degree, and meeting friends from everywhere, from other states, and that opportunity of just hanging out and stuff like that. He never got that. He never got that. He's going to be old and it's going to be hard for him to go back. He's going to be much older. Definitely an experience is going to be very different for him.

Gloria had challenges when she had to care for her father who had lost his job and had to move in with her, so she was responsible for supporting him until he got back on his feet. This forced her to work more hours, which was stressful and distracted from her schoolwork. As a result, she became disengaged from school and campus:

> I feel like this last semester, my dad lost his job, so I was like, "Okay. I'll use my financial aid money and you can live with me until you can get on your feet again." It's like, "Okay. How am I going to help my dad? How am I going to make him like less stress[ed]." Because I knew he was stressed, because who wouldn't be? You don't have a job. I mean, your daughter is taking care of you. So I was working something like 30 hours a week and I feel like that's when I

was most disconnected was when I had to work more, which is understandable because you're not at school as much.

Students may encounter major life events that have the potential to derail them from making progress toward their degree, such as Gloria's father losing his job. Some of them are family related and some are individual to the student. Sheldon's coming out as gay was a very momentous event for him which made him want to take some time off. Lee-Lee had a major illness that prevented her from attending class for a substantial period of time. She was concerned that she may have to delay her graduation, but she was able to recover and complete her classes. Other times, the impact may occur from events that happen to friends or roommates. Patrice experienced such an event and it definitely hindered her progress toward degree:

> Actually last semester there was a really huge incident with one of my roommates at the beginning of the semester. Basically he was going through some stuff and moved out, but it was really messy, so it really affected me last semester. So I didn't have such a great semester, so that was a really big problem last semester. I was still trying to deal with the roommate thing. It really affected all of my studies and stuff, it was just hard for me to do my work.

These low-income students had substantial work and family obligations that had a major impact on their time available for academic pursuits. In addition, many of the students had to commute because they could not afford to live on campus.

Economic: living on/off campus.

As noted, many students wanted to live on campus or at least very close to campus in order to derive all the benefits from that proximity to campus. Unfortunately, less than half of the students were able to afford the costs involved with living on or near campus for most of their time at the University. Those students who could afford to live

on campus derived great benefit from the experience. On-campus living allowed them to make friends, get connected to campus, and have more time to engage in educationally beneficial activities. A few students who were able to live on campus or near campus almost their entire time articulated how helpful the geographic proximity was for being involved and remaining connected to campus. Sheldon noted. "just living in the area, you can't help but be part of everything." They also indicated how vital living on campus was for making initial friends and creating their campus community. Suresh noted that:

> My main friends my freshman year were people who lived in my hall and we actually became really, really good friends. All the people on my floor were super nice. That was really nice to have that, come back home, and be like, "Oh, well, I have friends over here."

Suresh postulated that this early connection was an essential element of his positive transition to college: "I think that was one of the reasons why I adjusted to campus pretty well because I met nice people, and I was around nice people, and I always had friends to hang out with. So that definitely helped."

Another student articulated the academic benefit of living in the dorms and the "built-in" study group that naturally occurs in such situations. In particular, Tariq was in a living-learning community that contained only first-year students from his Business College. As a result, he had a group of like-minded students with whom he could study:

> It's always nice being around people who share your interests. We all had hard classes, well, that we thought were hard classes, freshman year. Everyone had the same classes. It was nice bouncing ideas off of each other, so I think that was really helpful.

A few students had an opportunity to live on campus for a portion of their time at the University and they acknowledged that they wish they could have stayed living on

campus. For Serena, the move from campus to home was a financial decision but she recognized the family obligations that went with the move back home and had wished that she had remained on campus. She noted that she wanted to move back to campus for her senior year but felt obligated to remain with her family. She reflected fondly on her time living on campus and how helpful it was for her in order to make social connections: "I'm glad is that I lived on campus freshman year because it gave me a chance to meet a lot of people from class. It's not like you meet that many people in between lectures." Lee-Lee only lived on campus for her first semester but she indicated how vital that semester was for making friends and how she did not make additional friends or have time for student groups or other activities once she moved back home: "After that because I went back home, so I have less time to spend on the campus, so pretty much all the friends I have right now is from the first year, like first semester of the first year."

Patrice was able to live on campus for two years and she asserted that such an experience is essential for making friends and feeling connected to campus. Patrice noticed a difference among those students who were able to live in the dorms and those who were not:

> I also think that living in the dorms for your first year is very important because that's how I made my group of friends. That's where all my friends came from, and I know people that didn't live in the dorms their first year, and they don't really feel as connected to people here.

Hank expressed his strong desire to be able to live on campus but his financial situation along with work and family obligations prevented that possibility:

> I never got a chance to live on campus. I really wanted that, but because of the financial situation and also all the hours that I put in, I could not be doing that. I

had to stay at home, come to school, and then go back and work over the weekends.

In particular, Hank wanted to live on campus to experience the social benefits: "I wanted to stay on campus. I wanted to be able to go out late at night with friends or living in the dorm experience and [be] able to make friends and get a chance to live with roommates." He attempted to compensate for the lack of living on-campus by joining a fraternity his freshman year. He enjoyed that experience but even that came with some financial costs: "I also joined the Greek community my freshman year as well. With the Greek community, I was able to build some friendships and brotherhood. Enjoyed all those experiences, but the financial situation in the Greek system is very expensive." He may have stayed with the fraternity and even recognized that it would have been a cheaper way for him to live on campus but it was still more than he could afford with the fees and utility costs: "It's not required, but they do ask you to stay in there. We heard it's actually beneficial to stay in the house because it's cheaper to pay at the house rather than living outside at a dorm or at apartments."

Economic: commuting.

Since many of the students could not afford the expense of living on or near campus, they had to make the decision to live off campus with family or in cheaper housing. These living arrangements were often further away from campus, thus, incurring a potentially lengthy commute. Not only was a larger portion of their day spent commuting rather than studying or other educational activities, but they were compelled to be more connected and involved with the activities of the rest of the family. This created a host of challenges for students and prevented them from maximizing their time

on campus and becoming fully immersed in their college experience. The low-income

students found it much more difficult to be involved in student groups and other

educational engagement activities recommended by the University.

For several of the low-income students, a combination of their financial situation

along with family obligations forced them into this commuting situation rather than living

on campus. Several of the students were commuters during most or all of their

undergraduate careers. Makeda explained how her finances constrained her options for

where she could live. She was compelled to continue to live with her family and that

impacted her ability to connect with campus. "Commuting is really hard when you live in

[outer-ring suburb]. If you live 10 minutes away, it's really easy, so I thought about living

in an apartment with a friend, but it's too expensive." The commuting combined with

finances even affected Makeda's eating patterns which could impact her learning and

ability to concentrate:

> I wouldn't eat for a long time because I don't want to spend money, and it gets
> really expensive to always eat on campus. I don't even have time to eat breakfast
> because I have to catch my bus super early.

Spending time on long bus rides or in a car can limit the time used for studying or

being involved in campus activities that occur outside typical class hours. Makeda

explained how the limited options with mass transit curtailed her involvement with

student groups, in particular one that she really enjoyed but simply could not make it

work with her transportation issues: "I don't really participate in it that much because you

know with the commuting really far, it's really hard to stay on campus when you need to

catch your bus by 5:00 p.m. because it doesn't come after 5:00." Lee-Lee also mentioned

that her commuting situation prevented her from being involved in some student groups:

> Some science clubs, but I didn't really go after the first year because I moved back home, and their meeting is usually like at 7:00 or 8:00. Because there is only one bus to go back to my house, I have to go home, I have to catch the bus.

These mass transit woes were a common experience for these low-income

students. Where the student resides can affect when they can take class or what activities

they can be involved with. For some students who may have access to mass transit

options that operate outside of rush-hours, the timing between busses can be an hour or

more which can create very long days or other issues for the student. Serena was forced

to deal with 15-hour days due to the bussing schedule and her class schedule:

> Definitely take the bus, especially my car is not that reliable. So it's just easier to take the bus. It just stinks sometimes because it comes every hour, especially in the evenings, and I take night class. So I have a 9:00 a.m. class, so I take the 8:00 a.m. bus on Mondays and Wednesdays, and then I have a night class, so that I don't get home, I don't take the bus until 9:30. So I'm not home until like 10:45.

Lee-Lee also wished for better and more frequent bussing options:

> It's so inconvenient to, from Edina to here. Like there's only one bus. I mean, there's express, but it's like at 7:00, only like two or three in the morning. Like if you don't have class until 1:00, but you still have to wake up at 6:00, and then take that bus. That's like not good at all.

Juggling the time management can be challenging for almost any college student,

but as noted earlier, the heavy work schedules for many low-income students greatly adds

to the time management challenge. Adding the time commitment involved with living at

home and commuting to an already busy work and school schedule creates additional

difficulties for time management. Leah noted that the lengthy commute while she lived at

home her first year increased her time management challenge because she was spending too much of her day commuting and the bus schedule made for a very long day:

> My freshman year, I lived with my dad, and it was in [a suburb], so I was taking two buses. It was just not a good situation because I wake up at 5:00 in the morning, come back at 9:00 at night, study. It was very stressful.

Leah also mentioned that she could not do homework on the bus because it made her ill: "I get very nauseous. I get very carsick, and so I can't possibly read while being carsick."

Hank was only student who noted anything positive related to commuting. He was able to make the best of his commuting situation by connecting with other commuter students early on: "When I first came here, I was in that first program where they did that Welcome Week program, so we established a very nice group of commuters. I'm actually still very good friends with my commuter groups."

Economic: cultural capital of first-generation students.

Some of the economic challenges faced by the low-income students were not related strictly to financial constraints and the time-based constraints connected to those limitations. Some of the challenges the low-income students encountered were related to their status as first-generation college students. Fifteen of the 21 students were first-generation college students for whom neither parent has a bachelor's degree. Two of these 15 have parents with either some college or an associate's degree, but the rest were first in their family, even with older siblings, to pursue a bachelor's degree. As a result, most of the students lacked the information and resources required to efficiently navigate the entire higher education process. The lack of knowledge and connections made almost

every step of their journey to a bachelor's degree more difficult as they were required to

navigate the path into uncharted territory without the aid of a road map.

Hank described how difficult it was to not have any parental knowledge or other

familial support in relation to college attendance. As an immigrant with the only

educational background being his mother's high school education in Vietnam, Hank was

left to fend for himself in navigating the educational system:

> Going through the four years of college was definitely very hard because none of
> my family members had a bachelor's background. I was the first one who actually
> attended a four-year university. So everything I learned, everything was all by
> myself. My parents did not grew up here. They didn't have any English
> background, nor they didn't have any college experience. My mom only went
> through high school back in Vietnam, so it was challenging. It was definitely
> challenging.

Simply getting into college in the first-place can be an overwhelming obstacle for

many low-income students who lack the cultural capital to understand the steps involved

in putting themselves in a position to get accepted, especially by elite institutions. Leah

reflected on the ways in which she was unprepared to take the ACT and failed to

comprehend its importance at the time or know anything about the format of the test:

> I didn't realize about the ACT that I needed to take it junior year in order to see
> how I did, and then take it again. I only took it once. I took it and I didn't study. A
> lot of my classmates paid for classes, for ACT learning classes. I didn't even
> know that the ACT was timed. I didn't know anything about it. I just knew that,
> "Hey I'm going to this test at 8:00 in the morning. I'm very tired." I even was so
> tired I left my ID there, my license there and everything. And I was so tired that I
> wasn't listening to their comments about it being timed and how once a section's
> over, you couldn't answer any more of the questions. I only got 15 questions in,
> and they're like, "Close the book, and start the next section." And I was like,
> "Okay. Well I got all the last ones wrong because I didn't even fill them in."

All along the way in the process of applying and matriculating, enrolling and

embarking on their college education, low-income students often lack a complete

understanding of the decisions that they are making and do not comprehend the

consequences of some of those decisions. When they do not have parental guidance to

help them in those decisions or seek out additional information and resources to help

them make those decisions, the students may make poorly-informed decisions which can

have long-term consequences for their pathway. For example, when Lee-Lee was

applying and choosing between different colleges at the University, she made that

decision without being truly informed of the choice or the implications of that choice:

> The first thing is I have to make decision between [colleges at the University].
> And when I decided, because my parents have no idea what's going on, and
> including me, I have no idea because I'm the first-generation to enter college, and
> I have no idea. I know there's many people around in high school or in college we
> can ask, but I have no idea what kind of question I should ask. So I just pick one
> that looks more professional.

The lack of cultural capital from their parents, especially among the low-income

first-generation college students, will make some of these students feel even more

disconnected from their families while they are in school and may believe that their

families don't support what they are doing in college because the family doesn't

understand the college experience. Gloria expressed her frustration with her parents' lack

of understanding about what the stressors she was experiencing in college:

> They don't really know what it's like to study. My mom never finished high
> school. My dad just graduated and went off to work, so they don't know what it's
> like to be in college. I'm with my mom and I'm like, "Okay. I've got to study.
> I've got to study." She's like, "You've been studying for a few days." I was like,
> "That's college. You have to do that." And she's like, "Why don't we go
> shopping or something. Let's go to Perkins, get some pie." I'm like, "That's not
> going to help my grade." And sometimes she'll just say, "Give it to God. Give it
> to God. Give it to God." And I'm like, "That's not, no, you have to do something
> about it!"

This disconnection with her parents was hurtful to Gloria, but she understood that it was simply a lack of knowledge and experience on their part and she used them as a personally motivating example to achieve her degree: "I think my parents don't really support me because they've never been to college. They don't really know what it's like. I can see how they are now and I don't want to be like that." Reese also found it challenging dealing with her parents' misinformation about college life:

> I think they tried as much as they could, but they didn't quite get what was going on. My freshman year it was definitely frustrating in the beginning just because I would try to explain it to them, and I think they had their ideas already in their head and trying to change those, that was difficult.

Even among other low-income or first-generation students, some of the students can feel disconnected or less informed, which may make them want to drop-out. Makeda was contemplating leaving the University when she first began, because her other low-income friends appeared better equipped to navigate the collegiate landscape than she was: "I felt like they were more prepared than I was, and they participated in Upward Bound. They participated in that and they know how college works. So that's when I thought about quitting."

Part of the absence of cultural capital for some of the students resulted in the inability to fully transition into college, which prepares them to transition to full adulthood after college. Hank discussed the life skills he was not able to gain because he had to live at home the entire time while he was in college. He was nervous about not being prepared for adulthood on his own after graduation:

> But I'm scared because I never had the experience of living by myself. I never got a chance to know what it feels like to pay for my own rent or paying bills or being the condition of living by myself. I think I'm very nervous and very scared

because I've always grown up with a family and always had the support, the family's always around. So I think I definitely missed out on that opportunity to develop that maturity for myself as an individual.

The lack of cultural capital can continue to affect the low-income students as they plan for and embark on their life after college. Their lack of knowledge about career options and the required schooling involved can result in poor decisions or planning. Like many students who are immigrants or from recent immigrant families, Makeda feels some pressure from her family to pursue a career in the medical field or something closely related that will ensure secure and lucrative employment. However, many of the low-income students are unaware of the preparation and grades required to pursue those careers, along with a detailed understanding of the actual post-baccalaureate schooling and training involved. Makeda illustrated this information gap as she was contemplating between pharmacy school and medical school:

> That's the two careers that I've been looking at and recently I looked up pharmacy's courses; like the students that go to pharmacy, the kind of classes they take and the medical school, the kind of classes they take. The pharmacy school, they take like eight classes a semester, and I was like, "that doesn't seem right." How can you take eight classes a semester? When I looked at medical school, they take like two or three classes a semester. Not only that, but the kind of classes they take at medical school seem more interesting, so now I'm like 98% sure I want to go into medical school.

Some of the first-generation students who were not able to gain cultural capital concerning college from their parents were able to compensate for the lack of capital by acquiring assistance from friends or other relatives. Carrie, who is pursuing a teaching career, received advice and support from her boyfriend's mother:

> His parents are very, very supportive, and she's also a teacher. We're actually very similar in our personalities. They're super supportive and always checking in on me, checking what classes I'm taking because she took the same route. Saying

like, "Hey. Don't get your masters right away, you won't be able to find a job."
So she gives me a lot of advice.

For those students who were not first-generation college students, family support

and knowledge about the college process aided those students in entering college and

persisting to graduation. Saulo was encouraged to go to college by his parents and older

sister, all of whom have bachelor's degrees. Saulo's family directed him to this

university, in particular, because his father did his bachelor's degree there and his sister

did her master's degree there and she was also a former employee of the institution. This

increased Saulo's knowledge of college as well as his expectations of degree attainment.

> Because my older sister, she had done college, and both of my parents. That's just
> the logical step where you graduate high school, you go to college, you get your
> degree from there. University of [Midwest] particularly, my dad went here. My
> older sister, she did her masters here and once she worked here. So because of
> that, I had the exposure to the U of M, and applying to colleges wasn't an issue at
> all.

Saulo's sister was essential to his introduction to this university and persuading him to

attend:

> My sister, she was helpful early on, just helping me get my foot in here. She gave
> me a lot of tours and stuff like that while I was even in high school, and I think
> she played more of a role in that.

Although all the low-income students in this study carried various forms of

cultural capital from their previous experiences to campus, most of them lacked the types

of cultural capital that are typically valued by the academy. Many of the students faced

additional challenges because they received no assistance from their families in

navigating the higher education system. This lack of academic cultural capital added to

the substantial economic obstacles that they were already facing. The challenges related

to paying for college and related expenses required many of the students to work a large number of hours and live off campus, which created additional challenges concerning time available for academic activities.

Social

The second of the four student factor areas in the Persistence Pyramid is social. Many of these low-income students do not have family members who have the knowledge and cultural capital to be fully invested and supportive of the student's college education. Their families may not be physically present in their lives, because either they are estranged or they live in another country. The family members may not have the educational background or financial resources to be very helpful to the student, both economically and emotionally. As a result, these low-income students need to rely on friends and other social connections for more support than most other students do. Under the umbrella area of social, four themes emerged as particularly relevant to the students' perception of their persistence: (a) friends, (b) faculty and instructional staff, (c) mentors, and (d) isolation versus connections.

Social: friends.

Many students identified "friends" as the most important factor or one of the most important factors that they believed enabled them to persist. All but one of the students mentioned their friends as at least a substantial factor in their ability to persist to the point of graduation. For these students, not only were friends essential in the standard ways that most higher education researchers imagine for social connections (e.g., having friends with which to socialize, attend events, go to the dining hall, and join student groups), but

friends also supplied some students with their primary source of emotional support as well as active encouragement for them to persist. For example, family members might not understand what the students are going through, so the students get that emotional support from their friends. Low-income students also rely on friends more frequently for resource sharing. A student may need to borrow a book or the use of a car or a computer with a particular program on it. Low-income students may not have access to these things on their own, but with the help of friends, they can gain access to those resources as needed. In addition, friends were vital for assisting low-income students to learn and understand the academic material in their classes. Without people to study with and learn from, many of the students questioned how they would have reached the point of graduation. Tariq illustrated how early those relationships begin and how essential they are for success:

> One of my roommates that I met during Orientation, before school even started, he's been my roommate for the last three years. We lived on the same floor freshman year. He's really, really smart, and he's also a finance major, so he's been really helpful in a lot of the stuff that I didn't completely understand. It's always nice to have someone that's a genius living right upstairs from you. So I think my roommate more than anyone has been helpful in that respect.

Tariq asserted that this roommate was the one person on campus that was most beneficial in helping him reach the point of graduation.

Hank succinctly summarized the feeling expresses by several students when asked about the most important factor in their persistence: "Just friends. Friends was the big key." Hank could not emphasize enough the importance of friends to his academic success and implored future students to find a group of friends with whom they could study:

Finding a group of friends to study with, not a group that's to socialize with, but a group who actually take education seriously because those are the people who're going to actually help you and mentor you, and help you navigate through all of those hard classes. Use that kind of system, networking with friends, because I don't think that I would be able to finish college by myself if I didn't have any support with friends because those are the people who actually help me pass certain classes.

Jacques echoed the substantial amount of academic support that friends provided:

So that's what I would recommend very highly to other students. I think being able to study with other students and really further your understanding of a concept by hearing somebody else explain it or being able to explain it to somebody else. If I can explain it to somebody, it means I know it, and if I don't get it, and somebody else can explain it to me, then whatever the disconnect is in my brain, maybe however they understand it will help me, and I will be able to understand it then.

Sheldon also put friends at the top of the list in articulating factors in his academic

success: "Probably friends. We do a lot of homework together. A lot of it's actually via

text message, strangely enough."

Earl explained that his friends in the fraternity served as informal tutors and

mentors and they helped each other with their school work:

Using the other members of the fraternity [has] been always helpful. Asking someone to review a paper, asking someone to look over my test results and see what I can do to improve it, or something like that has always been helpful for me.

Suresh explained that having friends to study with can be helpful even if the friends are

not studying the same thing because they can keep each other motivated to still spend the

time studying:

I try to go to the library where I see other people studying, so I'm more focused and more motivated, but sometimes if I'm studying by myself, I'm like, "Oh. I'm not motivated. I need to study with someone." So I'll just call up some friend, "Hey. What are you doing?" "Studying." I'm like, "Where? I'm coming right now." And then we just study together.

Yvette assessed that friends were the second most important factor in her ability to persist, just after her multicultural campus mentors, which she considered the most important. She explained how her friends functioned as cheerleaders motivating each other to persist:

> It's easy to tell when they feel like giving up. You can see it. You come to that person and give them that pep talk. And when they recognize it and see that feeling of giving up, they come to you and give you that pep talk, like, "We're almost done. It's just one semester. We've completed like eight [weeks] already—twelve [weeks]. So just finish it out." Just knowing that you don't want to let your friend down, and they don't want to let you down, and you have goals to be successful, so you've got to complete those goals together.

Suresh also noted that this "we are all in this together" mentality was helpful in staying motivated through the challenging periods:

> Everyone is in the same boat. You know that you're not alone and there are other friends who are doing the same things you are, so it keeps me motivated that way. Everyone's doing it. It's just not you that's going [through] a hell of a semester.

Makeda illustrated the exponential effect of making that first friend or two on campus and how that leads to other friends as well as a route to campus connectedness: "Once you make that first friend and then they introduce you to other people, and they make you go to clubs and the organizations here at the U. And then there you meet other people, and you feel connected." Serena also noted this snowball effect in making friends based on some friends she made during an internship that she had earlier:

> Once I met people on my internship and then realized we both went to the same school, then we kept in contact that way. From meeting one person that I really connected with and they introduced me to their friends and then the group just grows bigger that way.

Friends can be essential for creating positive social pressure to engage in those activities that students should do while they are in college. If the campus can employ fellow students to create an environment where students expect to spend time studying, doing volunteer activities, participating in research, etc., then many students may conform to those expectations naturally. Saulo exemplified such an experience when his roommate told him, "I'm going to start working in this guy's lab." Saulo sensed an expectation to keep up with his friends and classmates, so he responded in kind: "Oh. I should do that too, then." Tariq also noted that an academically rigorous environment can encourage students to push themselves to achieve: "Most of the people I come into contact with I feel are very smart, so that motivates me to work a lot harder."

Similarly, having close friends can add a level of accountability to a student's academic performance. Especially for low-income students, many of whom are first-generation, their parents may be unaware if they are not performing academically as well as they should be. Earl felt obligated to take greater responsibility for his studying and his grades once he admitted to his friends that his grades were slipping and he was on academic probation:

> The more individuals around you, the more determination you have [to] show them that you want to be successful. Having those peer individuals there to be like, "Oh. So how'd your grades go?" "Well. Not so good." "Oh. Well, what happened?" Having that support around me was very helpful. Looking at another individual in the eye and saying, "Oh. I didn't make grades." That was a really disheartening thing for me to say.

Several students emphasized the role that their friends played in providing them with the necessary emotional support and academic encouragement to keep going when

faced with challenges. Yvette had a best friend from high school on campus who shared a

mutual admiration for each other and that motivated them to persist:

> When we talk, we're still fighting the same battle, but we want to have the same
> success. So when I hear him say he looks up to me and things that I've achieved,
> and in reality, I look up to him. I see how dedicated he is and how much he has
> stuck through things. It's like we kind of propel each other. We're obviously
> doing something right if we're looking up each other.

Several students articulated that friends could make up for a lack of self-confidence

which may be common among low-income students. The support that Jenny received

from friends and roommates emboldened her to keep striving: "My friends and

roommates, I've always felt support from them. So having that support, just in my home

here, was nice. I just think that they were always encouraging and when I doubted

myself, they didn't."

Suresh articulated the importance of making friends in order for students to adjust

to the new environment of campus. He illustrated how living on campus can be a great

facilitator of those early friendships:

> My main friends my freshman year were people who lived in my hall, and we
> actually became really, really good friends. All the people on my floor were super
> nice, so that was really nice to have that. Come back home and be like, "I have
> friends over here." So I think that was one of the reasons why I adjusted to
> campus pretty well because I met nice people, and I was around nice people, and I
> always had friends to hang out with. So that definitely helped.

Yasir asserted that it may be helpful for some students to distance themselves from old

friends who are not in college and may be a distraction from school or who may not be

supportive of the student's goal of degree attainment:

> I have a lot of friends outside of school, and I have a lot of friends inside of
> school, but I think friends that I have outside of school, they are not related to my
> school work. I kind of disconnected myself from a lot of friends outside of school

because it so destructive if you end up hanging around outside of school and not doing a bunch of [stuff] that you are supposed to do. So in that sense, I focused my friends, like limited my friends, especially in these last four years, within the school.

Several students identified the classroom as a primary location to make friends with fellow students. Patrice articulated how those social connections formed in the classroom can be maximized to support students academically:

> It's also really nice to be able to meet up with someone that you have class with, if you have an assignment or a study group. So I try to make friends with somebody in all of my classes, so I can have that extra little bit of help when it comes time for finals or midterms or papers.

Devi regretted that he did not have an opportunity to create more friendships with his classmates but suggested that the format of the classes in his psychology major did not allow that to happen: "I wish I had gotten to know my classmates more, and especially in my psych major. There wasn't really anything for us to do in the classroom to like bond as friends or anything." Reese also noted that it was easier to make friends in her smaller classes: "Some of my smaller classes, I definitely felt more connected with them, but a lot of my bigger classes, it was just going and sitting next to whoever and doing what you need to do."

These low-income students considered their friends to be a major factor in their ability to persist to the point of degree completion. They relied on their friends to provide substantial amounts of emotional and academic support.

Social: faculty and instructional staff.

In addition to making friends in the classroom, students also noted that they made many initial social connections with faculty members and instructional staff in the

classroom. Occasionally, students would develop more meaningful interactions with

faculty outside of the classroom. Even those interactions that were confined to the

classroom remained noteworthy for many of the students. Several of the students

explained how important faculty members were in helping them persist to the point of

graduation. Yvette illustrated one of the closest relationships with faculty members. Their

advice and support help her stay in school and be academically successful:

> I think some of the faculty I ran into my first years here were really helpful. In my
> first year or so being here on campus, I met the faculty that I communicated with
> frequently and asked help from frequently. They are the same people from the
> first day I was here, up until now, and so and I think they were very helpful,
> almost like a strong family or support system. So just knowing that if I go see
> them, and I do need help with something, they will have some kind of advice for
> me, so that was a big help.

A turning point occurred for Jacques once he had an epiphany regarding interacting with

faculty and using office hours:

> My favorite teacher that I had in college was a French professor, and she was a
> great teacher, and I think that sort of kick started my [new perspective]. "I can go
> talk to you, and you can help me," and it turns out that I should have been doing
> the whole time because teachers are actually just people who can help you.

Several students mentioned the support and advice they received from faculty

members or other staff members, often in lieu of support from their families who were

either absent or uninformed about the particular issue with which the student was

concerned. When Saulo was struggling in a couple classes and was contemplating

switching majors, he relied on advice from his faculty mentor who was able to help him

evaluate his options:

> He gave me a lot of insight to help make informed decisions. I'm the first one in
> my family to pursue engineering, so I couldn't go to my mom and dad to ask for
> advice regarding majoring in engineering because they didn't really know.

Makeda noted the importance of meeting with faculty members during office hours and encouraged future students to make the time to connect with faculty regardless of how busy their student schedules may be:

> I've learned that when you meet with a professor, it's really helpful to understand the information. If I'm a mentor to anyone who is a freshman, I would tell them "meeting with the professor is really important, even if you're busy, make the time to meet with them."

Makeda urged students to overcome their fears of faculty and seek their assistance:

> Don't be afraid to get help. Don't be. Because I know I was really intimidated and afraid of my professors. They just don't seem approachable. Once you talk to them, they are not really that scary. So talk to your professors. Go to their office hours and anything you're confused about, ask.

A faculty member simply demonstrating care and concern for students in the classroom can dramatically improve students' academic outlook and their success in the course. Saulo illustrated a positive interaction he had with a faculty member after he did poorly on an exam and the professor left him a note to see him after class:

> I was more intimidated. He wants to talk to me, and all he's going to do is say, "You should drop this class, because you're not going to cut it." But, he was encouraging, "This is what you can do to improve your grades." After knowing that he did have a genuine concern, and he did care, that's what allowed me to continue pushing through the class.

Hank also took great comfort from the encouragement he received from one of his professors after receiving a low grade on a test: "I remember I did really bad in one of my exams, and he told me to look beyond that because it's not just this exam that is going to predict my life."

Several students noted being nervous about approaching faculty members, and they hoped instructors would reach out to students proactively and reassure students that

they are available and approachable. Lee-Lee explained that she would not seek a professor's help unless she was in dire need:

> I'm not an active person, so it's hard for me to just go to the professor's office and then chat with them is kind of weird to me. I want to do it, and I know I should do that because [it] will make my resume awesome, recommendation letters, but I can't. I know there is a lot of people that can support me, but I'm not the person to ask questions. Even though I know they are there to help me, I rarely go to ask for help if it's not an emergency.

Hank indicated that it can be very challenging for low-income students with their packed schedules to make time to meet with faculty and staff, as a result, his interactions with them were limited: "Very limited. Yeah, you didn't get a chance at all, there's no flexible schedules, and it was very hard to communicate with them." However, Yasir was very successful interacting with faculty. He even received offers of letters of recommendation without asking for them. Yasir's age, maturity, and experience probably played a role in enhancing those relationships with faculty members. However, Yasir was quite intentional in his approach both inside and outside the classroom:

> Mostly I interact with my professors, and I'm so friendly with them and that really helps. Most professors are really great, I always talk because they know me by name. I always go to the class, sit in front, and they're always right on my head. I cannot fall asleep. That's obvious, in the class. And then I ask a question if I don't understand something, and they know me outside of the classroom. I say "Hi. Hi." So I think the interaction is very positive.

Adrian articulated the importance of faculty members trying to get to know their students while acknowledging that such a task can be challenging at large institutions or in large classes:

> Professors who actually care about you as a person and not just see you as a number. I think that does help. I know a lot of people say the reason they go to a smaller university is because they want to be a name and not a number. Some professors here, they try to learn your name, they try to learn where you're from, a

little bit about you, and not just say, "Please write your student ID number down," when you're talking to them.

Gloria expressed frustration with faculty members who do not outwardly demonstrate concern for their students. She wished the University could work with instructors to avoid coming across as cold and indifferent to their students' concerns:

> Can we teach the professors soft skills? Can we teach them some communication skills, like have a little heart? I know you're smart, but be a little open-minded and understand what it's like to be a student and not understand [the material].

Since students spend the greatest amount of time interacting with faculty members in the classroom, that relationship in the classroom is vitally important. Several students expressed that they want their instructors to demonstrate that they care about the students in the class. In addition, several students explained that their academic success is greatly aided by instructors who are enthusiastic in the classroom and share their enthusiasm for the subject material with their students. Jacques explained: "If they are excited about teaching, whatever the subject matter is, that helps a lot, and it piques my interest to know that they are also interested." Even small gestures can go a long way in making students feel connected to the instructors in their classes. Patrice feels motivated to continue when instructors end the semester on a positive note of encouragement:

> I really love at the end of the semester, they're like, "Thank you. You guys were a great class," and they congratulate us on finishing the class, so it's just really nice to hear that from somebody that's teaching you.

These low-income students greatly valued the assistance and guidance provided by faculty and instructional staff. They also appreciated when faculty expressed care, concern, and encouragement, either in the classroom or in individual meetings.

Social: having a mentor.

In addition to interactions with faculty and staff, over half of the students in this sample had mentors, most of them through some type of formal mentoring program. Some were student mentors, some were faculty, and some were professionals outside of the University. A few students had particularly noteworthy experiences with a formal mentor that they found to be very beneficial. Serena had a community mentor that she found helpful:

> I was involved in the mentorship program in [the business college], so they pair you with a business person in the community. So I've actually still kept in touch with my mentor, so that was a really good program.

Saulo had good experience as part of a formal mentoring program that pairs undergraduates initially with a graduate student and then later with a faculty member. Saulo found both interactions to be helpful. He enjoyed getting the relevant perspective from the graduate student who helped him consider several different pathways for long-term career decisions:

> The first semester you were paired with a grad student mentor. This was when I was still in electrical engineering, so I had an electrical engineering graduate student, and the cool thing is he had degrees in electrical engineering and biomedical for his bachelors. So talking to him a lot also shaped where I was heading later on, and it was good to just see perspective from someone who's already been through it recently, as opposed to the professor.

Saulo found his mentor relationship with his faculty member to be de-mystifying and allowed him to have improved interactions with other faculty members after his first year:

> Once I met my faculty mentor, Professor [in] electrical engineering, he was great. Coming in, you think that all the professors are on another level, but in the end, they are just human like you. They have lives outside of class. So just being able

to see that side allowed me to not be as intimidated talking to other professors later on.

Saulo's faculty mentor was able to help him decide among several choices for major ad career options: "He also helped me with some of the problems I was having too. I'm having trouble in classes. I'm thinking I'm going to switch majors. He gave me a lot of insight to help make informed decisions."

However a few of the students did not find their formal mentors very helpful. They often believed they got more assistance from informal mentors, such as parents or friends who served in a similar role for them. Reese noted such a sentiment toward mentoring: "I definitely had mentors along the way. I would say the faculty came more into a role this year than in the past, but just friends and then my family again, pushing me."

Some of those students described their relationship with their mentors as ambivalent to almost negative. As part of her conditional admittance via the Post-Secondary Excellence program, Makeda was assigned an upper-class student as a mentor for her first two years in college: "They provide mentors for us, but to be honest, I don't think any of my mentors, I think I had two, were helpful. I just felt like it's something they had to do rather than like help us out." Gloria also did not have a good relationship with her peer mentor in the Post-Secondary Excellence program but that negative experience prompted her to become a peer-mentor herself which greatly contributed to her success:

> I feel like he was just there to get paid, just to do his job, and he didn't actually care. But that's why I wanted to be a mentor because I knew what it was like to not have a good one.

Social: isolation versus connection.

The benefits from social interactions, especially among peers, were particularly strong for this group of students. However, various life circumstances often pulled them away from these social interactions. Such moments of isolation and feeling disconnected from the rest of campus can become an important risk factor preventing persistence for low-income students. These circumstances can be especially prevalent for low-income students who may have obligations to their family and jobs that consume their time. Several students mentioned that their financial situations made them feel isolated from campus. Due to family and work obligations, Hank felt like he never had the chance to be fully immersed in the campus culture and college life:

> I think it's just because I didn't get a lot of time to experience that college experience. It wasn't that full experience that my friends would have, because it's always about coming here, just take my classes and leave and go to work. Never really get to enjoy the life on campus at all.

Leah also stated that her work only allowed time for studying outside of class and as a result, she felt disconnected from campus events and many pieces of the college experience:

> Whenever anybody's talking about Spring Jam or homecoming or any of those big events, I've never gone to it, and I've never had time to go to it. I was either working, or I was studying and I just didn't have that. Lots of my co-workers were big on going to the [football] games and stuff like that. I've just never had the time. Whenever they talk about, the next day what happened, and I was studying the night before, I just felt like I didn't really, it wasn't a full college experience.

Several of the students were experiencing isolation or lack of connection due to a significant shift in cultures. Four of the students had recently moved from other countries

and an additional three students were coming from very low-income, immigrant-based

communities. The home and family environment for these students was culturally very

different from the university setting so it was a shocking adjustment for them to get

accustomed to their new surroundings. Devi's experience with recently emigrating from

Cambodia exemplifies this challenging situation. He explained that the transition to

college was exponentially more difficult because he was still adjusting to U.S. culture

along with essentially starting over:

> I decided to come here, so it was a disconnect between people I used to know.
> People I know, family, and then just having to figure out what to do, where to find
> friends, where to hang out. And freshman year I'm still not getting used to the
> American culture because I'm still adjusting to living abroad. I keep telling
> people that this is my study abroad. I don't need to go anywhere else. It's making
> the adjustment and trying to figure out who I am, what I need to do, [and] what I
> want out of life, that too.

For many of these low-income students, transitioning to college can be an

isolating experience, even when students have former friends on campus. The re-

alignment of friends and activities can make some students feel very alone. Makeda noted

that during her first year she felt particularly isolated. Although she had friends on

campus, she did not feel a strong connection to them anymore, which made her want to

drop-out:

> I was like, "I can't do it, because I don't have anyone, any friends." Well I had
> friends that went to the U, but it just felt like we're apart now. Like I have friends
> that graduated from high school that came to the U with me, and they told me,
> "we're here for you," but I still felt [disconnected].

This separation from her friends made Makeda vulnerable to perceiving other situations

as personally disconcerting and isolating. For example, when her adviser did not return

from maternity leave, Makeda was really hurt by the situation:

I really liked her as an adviser, but she had a baby, and she left, so I was really upset about that. And I made a big mistake by not coming in and meeting with anyone. I was like, "If my adviser left, why should I come in and meet with a new person?"

Several of the low-income students mentioned that they wished they could have lived on campus because living at home made the transition to college more difficult since they were connected to family and consumed with obligations at home rather than spending time on campus. However, several of the students who were living on campus still had some challenging transitions and felt isolated and disconnected living in their on-campus residence halls. Jacques was feeling isolated during his first year because he could not relate or connect with the other students living on his floor of his residence hall:

> I think the dorm wasn't really what I was expecting. I lived on the honors floors. And I think I would have probably done a lot better not on the honors floors. I think that I didn't really relate very well to most of the people on my floor, where there were a couple who were pretty hard-core drinkers, and I was like, "Why?" And there were a couple who shut themselves in their rooms, didn't talk to anyone, and studied all of the time. I knew that I was like, "I don't want that at all."

Gloria had a similar experience in which she could not relate to the interests and activities of the people living in her residence hall. She articulated how isolating it can be for students if they are not connecting with the other students in their residence:

> Everyone was obsessed with cows and agriculture, and that wasn't me at all. My roommate would go home every weekend, milk her cows, come home and smell like cows. She had cow posters everywhere, and I was like, "I don't fit in here." And so I talked to the dorm place, and they let me move.

Several of the students recognized the vital importance of making various connections with other people in order to improve their chances for success. Creating and maximizing these social connections were some of the top recommendations that this

group had for other students. Carrie implored future students to make connections with more experienced students and get advice from them:

> Talk to older students. People in your major. Ask what courses they take. What were their favorite courses? Ask them that question. What was their favorite thing? What's helped them out? If you have an interest in something, find someone with that interest and ask them about it.

Patrice emphasized making connections with as many people as possible and in as many situations as possible:

> Connect with people in class that you have with you because that's very important because then you definitely feel like you are part of a bigger community. So I think living in the dorms and connecting with as many people as possible, joining groups, being active in homecoming or Spring Jam. I think it's all very important: going to sporting events, going to free things at [the student union]. Involvement is very important.

Like other students, Patrice illustrates the connection between friends and involvement activities and demonstrates how each of them can help build the other. As students make new friends, they are able to explore new student organizations and activities. Participation in these involvement activities provides additional opportunities to make new friends and connections.

Overall, socializing and studying with friends was a key essential component to the educational experience for these low-income students. They also valued making connections with faculty, mentors, and other campus peers and campus organizations.

Psychological

The third of the four student factor areas in the Persistence Pyramid is psychological. For this group of low-income students, various psychological orientations played an important role in enhancing their persistence. Under the umbrella area of

psychological, four themes emerged as particularly relevant to the students' perception of their persistence: (a) sense of purpose, (b) expectations, obligations, and motivations, (c) career and post-baccalaureate educational plans, and (d) familial support. The students articulated that it was important for them to know why they were in college. Having that sense of purpose along with various goals that included college graduation helped them persevere through various challenges. Those goals often included specific career or graduate school aspirations that required the earning of a degree. Imagining their future life helped them develop the motivation that they needed to sustain their academic efforts. In addition, many of them noted personal or familial expectations that pushed their striving to achieve. Those expectations along with familial support provided them with the necessary mindset to pursue degree attainment.

Psychological: sense of purpose.

If students do not have a goal or goals in mind and they do not have a clearly defined reason for why they are attending college, they are less likely to persevere through the academic and life challenges that they will encounter on the path toward graduation. This may be especially true for low-income students who may need to envision that "aspirational life" for themselves in order to continue to confront the many obstacles impeding their success. Moreover, without the cultural capital and assistance from family members, many of these low-income students must figure out their own goals and develop their own strategies for achieving those goals. The students' sense of purpose was shaped by various circumstances and was directed toward various goals, some more specific than others.

Regardless of origination or destination, many of the students expressed that having a clear reason for going to college and a strong sense of purpose in being there was one of the top reasons that they were able to persist until graduation. Hank stressed that knowing why he was coming to college was one of the top reasons for staying in college: "Finding out what [and] why was the intentions of going to college; what was the main reason for it?" Yasir credits his ability to finish in 4.5 years with 3 majors on his strong sense of direction and purpose from day one: "The most important thing that I believe helped me get all these things done in four years, it's knowing exactly what you want to do when you come to the school. That's the best thing ever." Serena noted that it was a strong motivator for her to know why she was there, and without that sense of purpose, she probably would have stopped-out:

> Just having a purpose for it from like Day One. So for me, I know if I didn't have the "Why am I doing this?" early on, then by now I don't think I would have made it. Because I wouldn't have seen the importance, but knowing why I was here definitely kept me going. So just having that competitive edge and also understanding for yourself, "why are you doing [college], why are you here?"

Yasir cautioned students about attending college aimlessly: "If you don't know what you're doing, you just end up staying in school more than you really need, and you're not doing all what you really can do." Serena asserted that it was particularly important for underrepresented students to have that sense of purpose and urged the University to help those who were struggling to help them find that purpose:

> I would say to help students find purpose or see the importance. Just looking at the multicultural students that I've come in contact with, there's a lot that I was friends with sophomore, freshman year, who aren't here anymore because once you start slipping, it's kind of a slippery slope.

Some students did not have that sense of purpose immediately upon starting college but discovered it or developed one reaction to some event. Earl had a particular turning point after he was placed on academic probation and it forced him to re-evaluate his dedication to his academics:

> I need to do better to show my family I can do well, and show the individuals who gave me a scholarship why I'm here. That year was a real defining moment in making me dedicate myself. I really looked back on myself and had a self-reflection on why I was here and what's the purpose of me getting an education. Now looking at it, [it] had a springboard effect into becoming a better student, becoming a better overall individual in terms of knowing my commitments, knowing my regulations, and knowing what I can and cannot do. I'm not invincible.

Many students discovered motivation related to their future and ideas about future careers. However, some students specifically indicated that they wanted to avoid the alternate future they envisioned if they failed to earn a degree. Gloria recalled her work experience in high school as motivation to complete a college degree: "In high school I was a housekeeper and a dishwasher, and I knew I didn't want to do that the rest of my life." Yvette asserted that her precarious position of not having any family to fall back on was useful in pushing her past any impediments to her degree. She recalls telling herself, "You've got to stay in college because if you don't stay in college, how are you going to have money? You can't go live with your mom. You don't really have an option. You just have to do it." Serena and other students mentioned seeing relatives without degrees and how few options they appeared to have:

> It's like everybody in my family, well, in my immediate family, my mom, my dad, and my sister [went] to college, and just seeing the opportunities that it opened for them. And also looking in my extended family and seeing people who didn't go to college, how many doors were closed because they didn't have that degree?

Several students had family members who did not attend or complete college and they served as a negative example that motivated the students to persist until they had earned that degree. Yvette's desire to not end up like her mother was a driving factor in helping her overcome many obstacles she faced while trying to earn her degree:

> I think a large part of it had to do with my family just because my mom, she only finished the ninth grade. I have to do something, otherwise, I'm just going to be stuck in the same position, and so, that was what helped me get through the majority of it.

Both Gloria and Jenny discussed that they did not want to end up in the same situation where they saw their parents. Jenny believes her parents' situation is primarily derived from their lack of college degree. She wanted to avoid similar limitations and it was a remarkable motivator for her to stay enrolled and earn her degree:

> My mom currently owns or is part of the [Fast-Food] franchise, and my dad, he owns a [Commercial-chain] auto body shop. I just don't think they had much choice in what they did with their lives. The constant reminder of my parents, just not wanting to do what they do. I've seen them struggle and I don't want to have to do that. I can't say it's all because they didn't go to college, but I think a large majority of their problems derive from that.

Even some of the students who had family members attend college still noted some of their struggles and used that as motivation to avoid similar pitfalls. Reese employed both her sister's and her mother's college experiences as negative examples that motivated her to persist:

> My sister, she's three years older, and she completed three years of college, and then stopped to take a semester off, and she never ended up going back. My mom didn't go to school until she had all of her kids: me, my sister, and my brother, and just seeing how much more difficult that made her life and dealing with having kids while going to school. I think that motivated me a lot.

Of all the students, Jenny had the most finely developed sense of avoiding the struggles of her parents. She noted that this avoidance also fed into her own personal self-motivation and expectations:

> I think it comes from not having college-educated parents and seeing their struggles in life and wanting to do something more than that, and I just always wanted to be successful. I've always been a very driven, motivated person. Just my personality, I'm a go-getter.

Jenny exploited those fears to strive for success. However, she had several environmental factors that assisted her success. She argued that her striving mentality was also honed in the competitive environment of her college, which pushed her to excel. She described it as, "my personal determination and the competitiveness within [the Life Sciences College]. I think everyone's fairly intelligent, so there was always kind of a competition and wanting to succeed." Jenny asserted that the overall campus environment was conducive to achieving success and she articulated it as a primary reason for being academically successful and persisting until graduation: "I think my personal drive and then just being surrounded by other successful, driven people. I think this campus, in general, everyone is very driven to succeed."

Yasir's motivation was somewhat less concrete than the other students' expressed motivations, but it was being intrinsically motivated rather than externally motivated which he credits with helping him succeed:

> I don't care about money to be honest with you. I care about doing what I love to do. Learning what I love to learn, a lot of people [are] driven by this idea of getting [a] college degree, getting into the best jobs, and piling up money and making all this big check. But my vision is not about making the big check. It's about learning the knowledge and enjoying knowing all this what I know.

These low-income students noted that having a clear sense of purpose allowed them to persevere through challenges. Understanding why they were in college provided a major boost to their resiliency.

Psychological: expectations, obligations, and motivations.

For many of the low-income students, their sense of purpose, as it related specifically to their reason for attending and completing college, was based on a standard set of expectations that they had for themselves and/or their families had for them. For some of them, the expectation to attend and complete college was simply a given in their family, there was never really a question, it was simply assumed that they would do so. For others, the expectation came from themselves based on their desire to achieve or to avoid the negative consequences of not earning a bachelor's degree. Many of the students indicated that these expectations were also closely connected to a personal drive and determination which served as important motivators for them to tackle obstacles and persist to the point of graduation. Some students also felt a sense of obligation to the people in their home communities and they did not want to disappoint them.

Although only six of the students were not first-generation college students, several of those six come from families with a history of college completion and thus, earning the bachelor's degree is virtually mandatory in those families. Adrian framed his family's background as, "My grandparents went to college. My great-grandparents went to college. My parents went to college. Their siblings went. It's just expected that everyone in my family is going to go." Tariq's family history may not extend as many

generations, but it was a similarly culturally engrained expectation that college

completion is required:

> My family is Indian, and everyone went to college. Most people, my parents, or a
> lot of my aunts and uncles, cousins, they all pursued schooling after four years.
> [Of] my three brothers, one's in law school, one got a master's degree from
> Miami, the other one's at [another four-year institution] right now. Not going to
> college and not graduating was never really something that was even an option, I
> mean, it was never really questioned.

For some of the students, familial pressure helped them stay motivated and persist until

graduation. Serena succinctly expressed this attitude as she named her family as a

primary factor in her persistence: "I think mainly my family because it's expected that

you do well, and that you go to college and you graduate."

Even among the first-generation college students, several of them still expressed

this very basic expectation for themselves and from their families that they complete the

degree. For many of them, completing college was simply the logical next step. Saulo

articulated this standard expectation:

> I didn't see any other option. That's just the next step that I had to take. I didn't
> really even question the fact of going to college, going for a four-year degree. It
> was just really ingrained in my head that that's what you do after high school.

Jacques noted that this standard expectation came from both his family and his

community: "Both in my family and in my hometown community, that was just the

natural progression of school. Once you're done with high school, you go to college."

Many of the low-income students acknowledged that they had a sense of

obligation to family, friends, the community, or others which required that they graduate.

This sense of obligation motivated the students to persist because they did not want to

disappoint others who were counting on them to succeed. Makeda's desire to avoid a

sense of shame increased her persistence: "I didn't want to disappoint my friends and my family like, "Oh, look. She's the one who quit at college." That's kind of embarrassing." Leah described a similar type of pressure she experienced from her family that required her to persist without hesitation:

> There was never a time when I wanted to drop out because it's kind of a pressure. I'm the first person in my family to get a college degree, so if I were to drop out, I wouldn't, and have no real good reason, my family wouldn't let me anyway.

Earl wanted to honor those who had faith in him by earning his degree: "I want to get my degree to make my family proud, and show that dedication to all my friends and family who have supported me over the years that doing this is the right thing." Jenny's friends and family had high expectations for her ability to achieve, which required her to model their perception of her: "I just felt like there was almost this standard or expectation that I had to live up to because of how people perceived me, and that was a good thing because it motivated me even more." Some other students also sensed this pressure from their communities and felt the need to succeed. Saulo wanted to make his home community proud: "Sure, it's tough, but I have people back home who are counting on me to make a name for myself."

Hank felt a particular sense of obligation toward his family to earn his bachelor's degree and get a decent-paying job to support his family:

> I wanted to really just finish school and then get a degree and then hopefully find a good paying job with a salary that I [will be] able to take care of the family and then get back what they invested [in] me.

Hank articulated this sense of obligation to his family as the primary reason for his persisting to the point of graduation:

Understanding where I'm coming from, being in a family of single parent and stuff like that. Not getting any support and all of that. Definitely, I knew that I had no other choice but to finish, do well in school and then [be] able to graduate on time still, pick up myself financially and help out the family. I think that was the biggest motivation.

In addition to expectations and obligations, many students articulated other sources of motivation, all of which they indicated were very essential elements of their success. This motivation originated from a variety of sources among the students. For Gloria, her personal motivation revolved around appreciation for a sense of accomplishments. She enjoyed tackling challenges and the sense of reward for overcoming obstacles:

I just really like the challenge, and I know that it will all be worth it in the end, like I have really positive thoughts and a lot of motivation, personal motivation. Because when you finish with that challenge, you have a sigh of relief and you're like, "I did that. It was hard, but I did that." So I think just knowing the good feeling that you get afterwards is what keeps me going.

Similarly, Serena's motivation centered around achieving a goal. Her desire for the permanence of this particular accomplishment aided her persistence:

The "I did it" factor was a huge motivator, just to know that "Okay, once I have this, I'll have it for the rest of my life" was a huge motivator to get me to go. And my parents were rooting for me and expecting that I do it.

Tariq also noted this self-motivation, but suggested that it probably was derived from his family and their expectations: "I was just intrinsically motivated, and I think that comes from my family more than anything."

Several students emphasized the need for students to find that motivation and to be self-motivated. Most noted some level of personal responsibility as a requirement for success. Lee-Lee explained that students were ultimately responsible for doing what they

needed to do to be successful: "If you don't want to do this, no one can push you to that. Even your parents cannot push you to go to ask your professor or your parents cannot push you to make friends." Earl echoed this sentiment: "It just comes down to self-motivation. I've always felt that you can give someone a lot of this information, but it just comes down to whether they want to use it or not."

Several students asserted that students themselves could create a sense of motivation. They recommended creating a schedule that would induce motivation. Having an appropriate number of credits and work hours or other responsibilities would create some time constraints for students such that they would be forced to prioritize and organize their time, avoid procrastinating, and feel motivated to do their school work because they did not have the option of delaying the work. Sheldon noted that taking enough credits was essential for creating stress in students' lives. He argued that this stress was essential for his success:

> Be careful with how many credits you choose to take, but also, never take too few. It's when you take too few that you have problems with motivation. So you always want to be somewhat stressed out about things. Otherwise, things just don't happen. And stress is kind of a good thing. I guess it motivates you, and it drives you, and you will live through it. Sometimes it feels like it's never going to end, but looking back four years has actually gone relatively quickly, and it's hard to believe that I'm finishing in five days.

Several of these low-income students mentioned feeling pressure to persist from family or community expectations. They also used those expectations or other forms of obligation to motivate themselves to persist.

Psychological: career and post-baccalaureate education plans.

For most of the low-income students, their motivational drive and determination was premised on achieving a goal that would allow for a particular envisioned future. Even if the specifics of that envisioned life were not perfectly detailed, the basic concept of a career and post-graduate plans that required an earned bachelor's degree was a driving force propelling many of the low-income students toward degree attainment. Often, the more specific and explicit the envisioned future became, the more helpful that vision was in producing the psychological motivation to persist. For some students, their envisioned future and post-graduation plans may have been rather vague when they initially matriculated, but over time those plans became more concrete and thus, gave greater impetus to complete the degree so the student could begin those post-graduate plans.

As noted earlier, several students wanted to avoid the negative outcomes of not obtaining a bachelor's degree. Thus, their persistence motivation originating from their envisioned future was primarily the avoidance of a negative future. This avoidance of a dismal future was often specifically connected to career options. Like many students, Devi wanted to avoid the minimal prospects that a lack of a college degree would provide for him. He illustrated such a desire based on his experience working while in high school:

> I was working at a grocery shop, and then I realized that I didn't want to end up doing this kind of work for the rest of my life basically. So I'm like, "I need to get out of here. I need to get out of [this smaller town], and I need a four-year degree to give myself a better chance of not ending up working in a grocery store forever.

Suresh succinctly stated a similar sentiment: "I know that at least in today's world, you can't do anything if you don't have a degree." Makeda was feeling the same way but hers was coupled with a career direction even prior to matriculation. Like many students, Makeda's future career aspirations left her with no choice but to earn her undergraduate degree:

> I wanted to be a pediatrician. I knew the first step is to go to college, so that was the only option for me. I didn't want to stay at home, or work jobs that I didn't want to work at. So I know like to get a good job, a job I wanted, I had to have a college education or even higher.

For many students, discovering a career direction and what they want to do after graduation can be a vital motivator that provides a renewed sense of purpose which helps them persist to the point of graduation. Although Devi did not have a specific career at the point of matriculation, once he discovered that career direction, it became a strong influence on his persistence and helped him stay motivated to graduate: "I guess I had a really strong resolution in becoming a therapist. That's why I know I had to keep going." Carrie was on a study abroad trip that was connected to both of her majors that provided her with the reassurance that she needed to continue without question:

> Not only was I able to immerse myself in a completely different culture and I was able to work with my Global Studies degree and my Spanish degree, but I also had an internship teaching English as a Second Language to the Quechua speaking community in a rural, indigenous area of Ecuador. That along with my Community Engagement Scholars program reassured me I'm on the right career path of something I'm passionate about. Definitely that reassured me that I did have a passion, and I did want a career with that passion. So it pushed me to choose my majors, complete my degree.

Several students had contemplated much further longer-term career plans and aspirations, but most of them were rather vague. Devi, however, was able to articulate a

specific long-term career aspiration: "I would like to go back to Cambodia and, if I could, I would establish an institute or a center for counseling, bringing in the western way of approaching counseling to Cambodia."

Like Sheldon and Saulo who were embarking on research Ph.D. programs, about 12 other students had already developed plans for graduate or other post-baccalaureate education which necessitated that they complete their undergraduate degree. Jenny acknowledged that her path past a bachelor's degree was simply a matter of fact: "I always knew that I wanted to continue schooling. After my undergrad, I'm actually going to dental school to start this summer." These post-baccalaureate plans served as a substantial motivator for the students to remain enrolled and persist to degree completion so they could embark on the next phase of their educational journey. Reese explained how her future goals of graduate school pushed her to strive academically:

> I'll be starting a doctoral program for clinical psych. I think it definitely encouraged me to keep up the motivation. Even with my GPA now, it was hard, because a lot of the doctoral programs are really selective, so it just encouraged me to keep up the motivation.

Seven of the students had immediate plans for post-baccalaureate education, while about seven others had more immediate career plans but were still planning on an advanced degree in the near future. The combination of immediate career plans, coupled with plans to further their education, appears to aid in their motivation to persist. Suresh had several job offers and had made plans to begin with a particular company but was well-aware of his father's expectation that he needed to complete a Master's degree prior to returning to India: "My dad said, 'Make sure if you do decide [to study in the U.S.], you're not coming back until you do your undergrad and grad.'" Suresh explained that

his U.S. undergraduate degree would not be enough for him to secure decent employment in India: "Especially in India, if I do decide to go back, over there, there's like no value for undergrad. So if I go back now with my undergrad, I wouldn't get the job." Similarly, Tariq knew he had to finish since he had already committed to a job that required a bachelor's degree, "I had already signed a contract for working next year." Although he planned to return for graduate school soon, he was expecting that a future employer would cover the associated tuition costs: "I'll go back and get my MBA before I'm 30. Hopefully someone else pays for it."

Several students had possible plans for graduate school but they were not definitive and they were still weighing their options. Gloria was exploring career options with her nutrition major but also noted, "I'm going to try to get into grad school for public health." Like Makeda deciding between pharmacy and medical school, Lee-Lee was considering choices "between a graduate school and medical school, it depends. And pharmacy school too." Yasir had the most specific possible options as he was choosing between a Ph.D. and a JD: "I have these two plans for my grad school. One, get Ph.D. in African development, become professor, teach as a professor. The other one is going to the law school, get my J.D. and practice as a criminal defense [lawyer]."

Of all the students, Patrice had the weakest plans, which may have contributed to her lack of success and help to explain why at the end of four years she was not close to graduating and was in danger of being suspended:

> After I graduate, I am going to work, probably still at [Sandwich Shop] for a little while, like a year or so. Then I just want to take a little break, because I do eventually want to be a teacher, but I just don't feel like I can go through another year of the program.

These low-income students indicated that they were aided in their persistence by having clear career or post-baccalaureate educational plans that required a bachelor's degree. When they faced obstacles, they realized that they had no choice but to continue or they would need to relinquish their future plans.

Psychological: familial support.

Like friends, another noteworthy tier of psychological support that increased students' persistence was support from family. Although it was not emphasized as often or as strongly as their support and connections with friends, many students still indicated that familial support played an important role in their ability to persist. Makeda asserted that is was both her friends and her family that served as the main factors in her ability to persist: "I would say parents, my parents and family members and friends that I made through school. Family, when I'm stressed out, they try to give me tips not to get too stressed."

Familial support was demonstrated in a variety of ways for different students. Gloria explained that her parents were not overly involved or connected to her college experience, yet discovered that they were still supporting her in unexpected ways: "My mom is very supportive with documents or making sure I was on deadlines. Like FAFSA, for the first couple of years, I didn't know I was filling it out. My mom was." Yasir's sisters did not go to college and were unfamiliar with what he was experiencing, yet they still provided him with needed emotional support:

> My sisters are always very helpful. They are really great. They always give me
> emotional support, which is very important. They always call me and then check

on me: how my day [is], and how I'm doing in school, and how I am handling all of these challenges. That's one of the most important things, emotional support

Several of the students expressed that their familial support was primarily in the form of emotional support. Leah described her mother as her greatest supporter by simply consistently encouraging Leah: "I think I'm my worst critic, so she's always the one that cheers me on. So she's probably the biggest mentor I've had." At times, the emotional support supplied by family members was quite simple and tried to get the student to feel as though there was no other option besides completing college. For Makeda that support from her parents encouraged her to remain steadfast even when faced with challenges: "My mom was like, 'You're going to be bored at home. What are you going to do if you quit college?' So I think friends and family made me push and try hard." Similarly, Resse's mother could sense when Reese needed some encouragement to continue persisting:

> My mom definitely understands. She can tell when I get frustrated, when I need that break, she's like, "Go, take a break. Come back to whatever you're working on." And then she'll remind me that I've done this much, "You can't quit now."

Like Yasir, several of the students received their familial support from siblings or other relatives rather than from parents. This may be more common for low-income students who are more likely to have parents who have not attended college and may not have the knowledge, time, or ability to provide much support. Saulo got a lot of his immediate familial support from his sister who formerly worked as an academic adviser at the University. She was able to provide him with a lot of practical advice as well as a lot of emotional support:

The fact that my older sister lives [close], she was always nearby that she was a good source of support when I was starting to question things. She was the one who I came to if I had some kind of event going on that my parents couldn't make the drive just for that, so she was there in the crowd, always cheering me on.

Since all of Suresh's immediate family was still in India, he received some familial support through his aunt who lived in the metro area. He would get some comfort of home by visiting his aunt and taking a break from eating dorm food:

Being able to go back to my aunt's house for that food and stuff like that, so those small things where you're eating dog food. You're bored, you don't want to eat that food anymore, but like, "The weekend's coming. I can go back to her place, eat nice food, bring some back."

Devi received small amounts of financial assistance from his sister who lived in a city about 60 miles from campus or occasionally from his parents when they were in the country. He also received emotional support and assurance from them, which aided in his persistence:

Whenever I need something, they would go the extra miles to get me something. I needed money to pay for health insurance. They helped out. I needed money for a new pair of glasses. They helped out. Just to be able to go home and eat with them, to have them come over and take me to eat. Just family stuff. I felt like I had a solid foundation to fall back on. So having that security gives me strength to keep going.

Other students also noted some small familial financial support, but the amounts may vary based on changes in the student's situation as well as the family's financial situation over the course of the student's undergraduate career. Fiona explained that her parents served as a financial safety net if she needed it and she did rely on them for greater amounts of financial support while she was completing her internship:

If I'm ever in a huge financially troubling situation, like my parents will like help me. And right now my internship is unpaid, and it's a lot of time, so I don't have time to have a part-time job. So my dad is paying for my rent right now.

Patrice indicated that she was required to cover most of her schooling costs but that her

parents helped out in emergencies and with smaller expenses:

> My parents help me out any time I am in dire [need and] desperately need help.
> But my mom, she buys my books for me every semester, so that's really nice, and
> she also pays my deposit for when I live somewhere. So it's really nice to have
> that extra couple of hundred bucks every semester. Other than that, it's just me.

For some students, this family support held greater importance than it did for

other students, but some students that lacked the family support mentioned that a lack of

familial support had a negative impact. The students who received little or no financial or

emotional support from their families indicated that they experienced a significant

additional burden for completing college entirely on their own. Leah noted that a lack of

family financial support forced her to also feel emotionally burdened with completing

college on her own: "It was something that I had to have wanted for myself and be

prepared to financially support myself through because there was no way that they could

afford to help me through college at all." Lack of familial support can be more

troublesome if it is openly antagonistic toward earning a degree. Yvette had serious

complications in her relationship with her mother. She really did not get support from

either of her parents:

> My dad was never around, so he is not supportive at all, and then my mom, she
> has had her share of issues, and she was definitely not as supportive as she could
> have been. I felt like I was always fighting against my mom, or she was fighting
> against me, rather than helping me.

Yvette encouraged future students to do whatever they can to cultivate familial support

because she asserted that it can make a vital difference and she wished she had received

support from her family:

If there are issues within your family, work those out. One of the things that I noticed is that my friends who, I wanted to go on to medical school, the friends that I noticed that did go on to that, who were facing the same issues I was, they had strong familial support, and I feel that would be important. I feel that almost would have made all of the difference for me is having family.

These low-income students recognized several psychological factors that enhanced their ability to persist. In particular, they emphasized the importance of having a sense of purpose and clear career or post-baccalaureate education plans. Feeling a sense of support and expectations and from family and the community were also noted as being helpful.

Academic

Economic, social, and psychological factors clearly affect persistence, often because they have an impact on academic performance: students having the time and determination to put forth the necessary effort to succeed academically. The last of the four student factor areas in the Persistence Pyramid is academic. For this group of low-income students, academic factors appeared to have less of a direct impact on their persistence than the other student factor areas. However, since many of the various academic factors were affected by the economic, social, and psychological factors, the academic factors still played a vital role in the students' academic success and persistence. Under the umbrella area of academic, four themes emerged as particularly relevant to the students' perception of their persistence: (a) choice of major, (b) high-school preparation, (c) study habits, and (d) course format and teaching style.

Academic: choice of major.

For many low-income students, especially low-income students who are first-generation college students or from recent immigrant families, their choice of major is often connected to a direct and related career path, often one that is perceived to be well-paying, i.e., a "practical" major with a "practical" job afterwards. Frequently this major is heavily influenced by family, either based on basic economic desires to be more financially stable or a cultural expectation that the student will be responsible for supporting the family financially in the future in return for being allowed the opportunity to attend college. At least 10 of the students in the study noted feeling such pressure connected to their choice of major.

During her first year, Serena was planning for a liberal arts major but got pressure from her family to pick something that was perceived to have a more immediate and direct financial return: "I wanted to do African American studies and go to law school. And then my dad's like, 'Okay. That's great, but are you going to make any money? Have you ever thought of business?'" As a result, she changed her mind and decided to double major in two business areas: Entrepreneurial Management and Accounting.

Jenny is going to dental school, so she decided to pick a major that would include some of the prerequisite courses she was required to complete prior to applying. Although she did well in her courses and her major, she regrets not choosing a major about which she was more passionate:

> It's not like I love biology, but I'm good at science and math, and those have always been my strengths. When I came into college, I knew I wanted to go somewhere in the medical field, and a biology major overlaps all the pre-requisites for a health professional school. I know that's probably not the best

reason to choose a major. The classes weren't super interesting. I haven't had any classes where I've been like "Whoa, that's so cool!" So in that way it probably wasn't the best major for me, because I should have enjoyed it a little bit more.

Yvette, like many students from low-income recent-immigrant families, was encouraged to pursue pre-med or related health-care fields or other "direct-track to career" majors. However, she was not doing well in the prerequisite courses and it was negatively affecting her overall academic performance. After some careful self-reflection she switched to a Spanish major and began to flourish because she truly enjoyed what she was studying:

> I started really sitting back and looking at things and I realized that I was getting like B+'s, A-'s in my Spanish, but I'm not even devoting all my time [to those classes]. I do that just kind of on the side quickly. So I thought like "maybe you were wanting to be a doctor because it seemed like the right thing to do. Who does Spanish? What do you do with Spanish? What can you do with that? But you do better. You like it better obviously." I wish I could have spent more time [on] nights when I would have Spanish homework, but I had to do other homework. So I switched my major over and sure enough, I'm doing better in my coursework. I pay more attention. It's more interesting to me. And I feel like I'm learning more from my Spanish classes now than I was before just because I can actually put time into something that I like.

The low-income students also receive similar messages from friends and classmates, but the perception may be more acute for low-income students who feel financially less stable or have financial obligations for their families. After Hank was denied admission to the Dental Therapy program, he needed to choose another major quickly and his post-graduation career options weighed heavily on his decision. His friends and classmates encouraged him to get a business-related major because: "those kind of majors, those kind of degrees, can get you a job right on the spot after college."

Some of the students were able to explore majors and degree programs that had personal meaning for them without necessarily being connected to an immediate career path. Although there are many direct and related career paths connected to Sociology, Yasir discovered and appreciated the major for the deeper meaning it provided for putting a context to his life:

> Sociology is really connected to my life in very deep ways because it talks about what does it mean to be a Muslim immigrant living in the United States at this very particular time. It kind of enlightens you to think in this way and figure out your place in the society.

However, Yasir suggested that many students lack direction and that making an early connection between major and career may increase students' persistence. He recommended that students reflect on what type of job they want:

> You would ask yourself, "What [do] I really want to do with my life. What kind of job do I really lean towards? And what kind of major is related to the job that I really want?" Because finding connection between your major and the job is one thing that makes you decide exactly what you want to do in school. I know a lot of people come here without knowing exactly what they want to do, and they just wander around.

Many low-income students in this study approached college with a very frugal consumer mentality, which affected their choice of major as well as credit loads. As a result, many of them chose to cram as many credits and as many majors and minors as they could into four years, in order to save money and to maximize their credentialing outcome. On one hand, this is very wise. At University of Midwest, there is a tuition plateau, so every credit above 13 is free each term. So when several of the students averaged 17-19 credits each semester, this made good financial sense. On the other hand, taking such heavy credits loads can put them at risk for academic probation or

suspension. Even if they are successful, their GPAs may be lower than what they would

have been if they had stayed closer to 15 credits each term. As a result, many post-

baccalaureate programs that require a competitive GPA will not be an option for these

students. After two years, Hank had to quickly change direction and choose a degree

program that he could finish in another two years. Since many programs could not be

finished in only the additional two years due to course sequencing, Hank had limited

options. Even with a major that could be started and finished in two years, Hank had to

take heavy credit loads because he could not afford to stay beyond the four years:

> I knew I only had two years left, and I wanted to graduate in time because [of] my
> financial situation. I was able to squeeze all my credits every semester and try to
> maximize as much as I can, averaging about 17 to 18 credits each semester, so
> five credits more than being full time. I'm very glad that I'm able to squeeze in
> the last two years for a whole major.

For some of these low-income students, their economic background played a role

in their choice of major. Their ability to be successful in their chosen major may also

have been impacted by their low-income status, depending on their high school

preparation.

Academic: high school preparation.

Some of the low-income students in the study were shocked at the nature of the

course content in some of their college courses. They criticized the University for

expecting first-year students to be at an advanced level that was beyond their high school

preparation. Yvette indicated that she had extensive background in calculus and yet was

not ready for her college math class:

I had taken calc in high school and got an A in it, and then when I came here I was like, "What in the world? There's no numbers in this calc. It's all letters." So it was a whole new calc to me, and I felt like I had no choice but to see a tutor.

She was astute enough to take advantage of the resources available to help her catch up, but she was unable to get all of the assistance that she needed: "They would definitely help me out when I had the problems, but there were other people who needed help, so they can't just sit there with me the whole time, and that was the hard part." Hank blamed his high school curriculum for creating difficulties for him in certain courses: "Science classes were something that I definitely did not enjoy just because my high school didn't prepare [me] enough."

Leah switched to a more rigorous high school during her sophomore year and the adjustment was extremely difficult. However, as a result, she was better-prepared to handle college-level work, but she asserted that the University and the state needed to do more for students who may be capable of advanced work but attended less rigorous high schools, like she did initially: "There is something that the U can do in terms of getting people ready [and] something that the state has to do in terms of making the schools better." She argued that the University should take greater consideration of the outside factors that may have impacted the high school GPAs of low-income students and realize that the GPA may not be indicative of the students' academic abilities:

> The U could also be more concerned [about] the people that do show a determination to do well in college and give them a chance because it might seem like they might not have tried in that class, but it might be because, like me, they were working during high school, too. They also had little sisters to take care of and lots of family obligations. I guess it's something that has to take time to change in terms of diversity on campus.

Even for students who attended high schools with rigorous curricula, several

noted that there was still a major adjustment required for them to do well. Adrian went to

one of the best high schools in the nation and he still found college course work to be

challenging at this institution:

> It was a big difference coming from high school to college, even though I did go
> to a college preparatory high school, there still was a huge transition. I mean, in
> high school, I did not have to study for my tests. So obviously, the level of
> commitment even though it was a Top 100 high school in the country was far
> different from what it is here.

However, Adrian asserted that the greater commitment required for his college courses

helped him be academically successful:

> Having some classes which really challenged you, which actually you couldn't
> just rely off of your ability to memorize, but you also had to gather a better
> understanding of the course material. You had to go talk to your professors. Just
> that wake-up call is what really helped me succeed the most in my time here.

Some of the students were well-prepared to be successful in college. Sheldon

credited his PSEO coursework for making him prepared because it was mostly online or

correspondence courses. Thus, he was required to be very independent and diligent to get

through the courses and teach himself a large portion of the content. Devi also had PSEO

courses, which he credited with making him prepared for college:

> I think it gave me one free year of college, so I had a year ahead of time before
> other people. It was a community college. It wasn't that difficult, but I took some
> honors classes at a college level, so that did help prepare me a lot.

However, a few students who had Advanced Placement or other college credit

earned while in high school, complained that they were not prepared for the next course

in the sequence at college because the expectations to earn college-credit at the high

school level were not as rigorous as the same course at the University. Jenny lamented

that she would have been better off taking general chemistry at the University rather than

getting AP credit for it:

> I think organic chemistry was a challenge for me. I started it right [in] my
> freshman year because I had AP credits for general chemistry. Not that they're
> super related, but it is different taking a chemistry course in college versus high
> school. Granted I got college credit, it was just a completely different ball game,
> and I wish I had taken Gen Chem here because to jump into O Chem, it was hard.

> Several of these low-income students were not adequately prepared in high school

for college-level courses in particular subjects. Similarly, some of the students did not

come to college with the necessary study habits that were required to be successful.

Academic: study habits.

Many of the low-income students in this study lacked adequate study skills

required to be successful in college courses. Even some of the students who had AP

classes or other experience with college-level course work, struggled to adjust to the

academic rigor that was required to be successful in college courses at a research-

intensive institutions. Earl had an immense learning curve adjusting to his courses. He

lacked a complete understanding of the time and dedication required to remain

academically successful. After his grades dipped and he was on academic probation, he

learned to make adjustments and prioritize his school work and time dedicated to his

education:

> Having the ability to learn and adapt over the years has been very helpful to me.
> In terms of realizing what I'm able to do in terms of time commitments, in terms
> of what is expected of me in the class, and all that. When I first started out, early
> classes are more loosey goosey. I thought I'd be able to work more and [spend]
> less time studying, and then obviously the grades dipped a little bit, but over the
> years, I learned again how to adapt and spend my time wisely on my education.
> Now sitting here four years later, I'm looking at a degree and starting my
> licensure program.

Similarly, other students did not realize the amount of time and effort required to be successful in college courses, particularly in some math and sciences courses where some low-income students' lower-quality preparation may require them to expend even more time and effort than other students in order to master the material. Serena believes that many low-income students and students of color shy away from some majors if they involve difficult math or science courses. When she talks with prospective students about majors, they often respond with: "Oh. I'm not good. I'm not good with the math." To which she replies: "I wasn't either. It's just how hard do you want to work at it to be able to understand it." She asserts that colleges and high schools need to do a better job trying to steer low-income students into those programs where appropriate: "I think that they could do a better job to show, like no one's born understanding this stuff."

A key factor in student retention and persisting to the point of degree completion includes academic success in their courses. They need to get high enough grades so they can continue in course sequences, have the courses count toward their degree and their major, and avoid being placed on academic probation and suspension. Academic success in courses requires that students develop the study skills required to effectively complete homework and prepare for exams and other graded aspects of their courses. A turning point for Serena occurred when she realized she was capable but simply had to devote the time and energy to being successful:

> If I really concentrate on this, like anybody can do anything if they just take the time to do it. I mean, and I was looking at the students who were doing well. It's not like they're brainiacs, but they just study, and they really focus on it. So I'm like, "I can do that too."

Developing study habits that devote a sufficient amount of time and in an efficient

manner may be a challenge for many low-income students. Many of the low-income

students in this study were under such severe time constraints based on work, family, and

other obligations, that it was nearly impossible for them to devote the necessary time

required to achieve the level of academic success that they desired. Hank noted that his

work schedule forced him to study less than he would have liked and he gave up sleep in

order to have at least some time to study.

> It was a lot of studying and then because of my work schedule and everything like
> that, I [was] not able to apply all my studying schedule in there, because I work a
> lot. So that was definitely hard, very challenging. The tests are much harder than
> what I thought it was going to be.

Yasir illustrated the challenges facing low-income students to juggle everything and still

have time to study and do homework:

> I work at the museum, and it is hard always because you do have the
> responsibility to maintain your life and keeping busy in school as well, and that
> affects your school. Sometimes I do have a lot of homework, [but] you can't do
> all this because you have to work at the same time. It's really challenging.

Many of the students mentioned that work and other obligations prevented them

from having enough time to study and do homework. Leah combatted this dilemma by

being hyper-organized and working ahead whenever possible:

> I never did anything last minute because I never knew if I would have time to do
> it last minute. So I would always try to do it ahead especially in the beginning of
> the semester when the work load in the classes are a lot lighter. I would read the
> rest of the book. I would try to get through the whole book and take all the notes
> that I needed, and then just study off of those notes. Otherwise, I wouldn't be able
> to read the assigned readings as the teacher assigns them because I would never
> have the time. I would always try to get ahead especially if there was a spring
> break or Thanksgiving break. I would definitely try to get two or three weeks
> ahead in terms of assignments.

However, many of the low-income students in this study lacked the previous experience with such study habits, may not have friends that encouraged the development of those study habits, and simply did not have enough time available to devote to studying and homework. The time constraints can be especially challenging when students are faced with a subject that they do not learn easily. Fortunately, Jenny was able to devote the time she needed to pass organic chemistry, because she was forced to study every single day during the semester:

> It was something I'd never done, just always reviewing the notes and looking at flash cards [while] walking to class, just to keep my mind up with it. Otherwise, I'd sit down in the next lecture and have no idea what we were doing.

Serena needed to alter the way she was preparing for her classes in order to be more academically successful, especially as she was confronting subject material that was outside of her comfort zone:

> So just overcoming that and realizing, if you study, you will actually do well in the classes. So really what helped me is talking to the teachers, making sure that I was staying on top of the homework because it's easy when you don't have, you know, you don't have a, you don't have a test for a couple of weeks, like, "I'll do it. I'll do it the night before." And then the night before comes, and I'm like, "Okay. There's no way I can read six chapters and understand the math behind it and do well."

Several of the students mentioned how their coursework and corresponding homework and lab time consumed so much of their time, that along with work or other responsibilities, they had very little time for sleep or other activities. Sheldon described his average week during the semester required about 70 hours of academic activity: "Well, the class time is probably close to 20 hours. Just sitting in class and going to labs and stuff. And I probably did at least 50 more in homework every week." Sheldon

explained that working 40 hours a week in the summer felt like a vacation because he had

so much more available time compared to the school year: "Over the summer I did 40. I

didn't have classes to take up my time so it was a full time job basically, and it felt like

free time. Forty hours was like half time compared to my homework."

Many of these low-income students indicated substantial academic improvement

once they were able to improve their study habits. Similarly, some of these students had

to make adjustments to the format and teaching style of certain courses.

Academic: course format and teaching style.

Not only were some of the low-income students unfamiliar with the academic

rigor and time required to succeed in their courses, many were unfamiliar with the

format, structure, and teaching style of many college courses. Hank recommended that

future students comprehend how grading works in college classes as soon as they arrive

on campus. He also suggested that students find a group of friends who are willing to

avoid procrastinating and help each other achieve academic success:

> I think the most important thing too, is understanding that the grade system, it's
> all about the finals and all those mid-term exams, so study. Study. Even though
> it's hard, but if you find the right group of friends, you're going to able to study,
> and you're going to get out [of] that procrastination.

Adrian also recommended that students overcome some of their potential academic

challenges by working in groups. He suggested that having a study group was an

essential element of academic success, especially for students who are having academic

difficulties:

> Find a study group, if you find yourself struggling with a class. Even if you are
> not struggling, I would recommend you find yourself a study group to get together
> with a group of people, go over the homework, prepare for tests, projects,

whatever else you have to do for that class. I do believe cooperative learning is very beneficial especially in college.

In particular, several students complained about large class sizes and how difficult the learning environment can be for them in large, impersonal classes. Reese indicated that large class sizes made it difficult for students to interact with the faculty and develop personal relationships with them:

> I think it was definitely harder to get to know staff and faculty because the classes are so big, especially your freshman and sophomore years. This year I got to know a couple of them better just by doing research and just having the smaller class sizes and talking to them more than I did in the past. So this year I've been able to form good relationships with two of them, but it definitely was hard in the beginning.

Gloria hypothesized that having smaller classes would increase students' learning:

> I think that having smaller discussion classes would definitely help. Just being able to break apart from the huge lecture and sit down and discuss things a little more in depth and maybe help you remember them a bit better. So you're not sitting there memorizing it for the final, so you're actually sitting there learning. I think that would be beneficial.

Jacques suggested that a professor's teaching style could combat some of the negatives experienced in a large-lecture class:

> I've had some English teachers in larger lecture halls and it's really easy to not listen to them, but they portrayed the information, and they're just so excited about it. It's very clear that they like studying this, and they like teaching it, and they really want you to be engaged. So I think that for me is enough, "You're really excited, so I'm going to listen to you."

Yvette indicated that the large classes did not fit her learning style, especially the pace of the presentation of content:

> It just felt really discourag[ing]. I felt like I had to catch on to everything so fast and I couldn't. I feel like anyone can learn those materials, but some people have to learn them at different speeds. It was like the big class size was designed for faster learners.

Yasir also found the pace of the material to be unreasonably fast in some classes:

> I found statistics professors, they're really quick, because when you don't have very strong basics, and it's hard for you to catch up with this speed. Some professors are really speedy when they teach math. They immediately, before you even copy down, they just wrap it away and continue with the speed. I felt like I'm sitting right there stupidly, feeling behind everyone.

Several students noted a distinct difference in their interactions with their classmates during the larger classes that they had early in their college career and the smaller classes they had later in their major. Once they were acquainted and comfortable with their classmates, they were able to interact effectively and learn from each other. Saulo described this challenge of connecting with his fellow classmates early on:

> I couldn't really establish any sort of lasting friendship with anyone from those general large classes. It wasn't until I got into the [major] classes where the group of people that you are going to see for these remaining years, you see them every day. You all sit in the same places and you actually know their names. Once I got to know those people and got more comfortable, it's like, "We've got homework today. Let's go work on it." That's where I started to work more as a team with other students. And I think it's just because I actually got to know them as opposed to asking someone who I thought, "he knows all this, and I'm just going to sound like I'm dumb because I don't understand it." I think that was the one thing that intimidated me from asking other people because I thought they knew it all and I didn't.

Yvette explained that she had similar experiences, especially in her Spanish classes. She was not able to open up in the classroom until she studied abroad and improved her Spanish skills and self-confidence:

> A lot of times I wouldn't speak up in class because I was self-conscious about what level I was at in comparison to the other students. Now I enjoy them more and I'm able to communicate more with my classmates and participate more. I don't worry about doing group projects because I feel like I'm on the same level as these students and I don't worry about communicating with them.

Although the students wanted to connect and work with their classmates, several

students expressed concerns about group work and group projects where certain members

did little work or had conflicts with the rest of the group. Jenny had a particular

challenging class that was based primarily on group work, including a semester-long

group project and a peer evaluation. At midterm, the instructor accidently shared the

students' confidential comments and evaluation of each of the other group members:

> I think 25% of your grade is how your peers grade you. Halfway through the
> semester, our professor had us do a practice run for grading each other. Then he
> sent out the results, not anonymous like he said they would be, so everyone saw
> what everyone said about them. They knew what I specifically said, so I think that
> was just a disaster because that was only halfway through the semester. Then we
> were expected to work with that same group for the rest of the semester when
> people weren't too fond of each other after that, because we were asked to say
> their weaknesses and what's one thing they can improve on. I mean, it was kind
> of a negative evaluation.

Several of the low-income students in this study expressed that they frequently

experienced self-doubt in their classes and questioned whether they belonged in college.

This self-doubt may have impeded the students from seeking help from their classmates

and their professors, fearing that they are the only ones who do not understand certain

basic concepts or particular elements of the course material. The self-doubting, low-

income students often believe that understanding the material and homework comes

easily for the other students. Then they attribute their own struggles to a lack of

intelligence. Saulo was having difficulties in a class which made him question his future:

"Doing the homework [was] challenging because [I was] basically starting from nothing,

and seeing all these other people, it's so easy for them. That's kind of like, 'Oh, am I cut

out for this or not?'" This self-doubt stopped Saulo from seeking help from classmates or instructors:

> I think that was the one thing that kind of intimidated me from asking other people because I thought they knew it all and I didn't. I don't want to go and ask for help, I'll just try to figure it out.

He was afraid to ask, "someone who I thought, 'he knows all this,' and I'm just going to sound like I'm dumb because I don't understand it." The turning point for Saulo came when he developed the courage to work with his classmates: "Actually talking with my fellow students and them saying, 'I don't understand this either.' So that was like, 'Oh. Okay. Well, let's figure it out together.'"

Serena illustrated the crippling effects of this self-doubt: "I felt like everybody in the class was smarter than I was, so it's always having to talk down the negative self-talk like, 'Oh. You don't know how to do this. You're not the smartest person in the class.'" Makeda also noted that this self-doubt also makes some students shy, which also inhibits their learning and academic success. She recognized that during her first year she was inhibited from making those connections with her classmates, which would have helped her academically:

> Freshman year I was really scared talking to people sitting next to me, but as you mature and get more confidence, you start talking to people next to you. That's really helpful because when you talk to people in your class, then you meet up and study together.

Yasir asserted that overcoming such fear of sounding stupid is the key to success in courses:

> I think one of the most important things that makes you successful in the class is finding people, talking to people, because everyone who [is] in the class, we are facing the same problem in the classroom. Because there are some people who

just say, "Oh, well. It's just only me who is feeling this problem." I'm sure a hundred students inside the classroom who are feeling exactly like you. There are a lot of people who they're embarrassed just to say, "I don't know that." I think that is another problem. There are students next to you facing the same problem. Say, "Let's make a group study."

Jacques also overcame his fear of appearing stupid and reiterated the benefits of working with classmates on difficult concepts:

I think I got a lot out of studying with other people in my classes whenever that was a possibility. Particularly in History of Literary Theory which I think I was pretty unprepared for just because the reading was of such an academic caliber that I had not ever encountered before. So a lot of times I would go to class and be like, "No. I read it. I did. My eyes looked at the words." But, so to be able to kind of say, "I don't think I understood that. Did you?" was really helpful for me.

Students had many opinions on the teaching styles of their instructors. Overall, they really enjoyed instructors that got them excited about a subject, helped them realize the practical application of the material, were able to provide concrete examples, and were able to explain the content in a manner that was comprehensible to the students at their level. For example, Sheldon had a professor who was very adept at getting students to understand very high-level complex material:

He's just really good at teaching. Some of the professors are good at the research but not the greatest at teaching. He's a really good teacher. He takes time to figure out how to explain things. He comes up with really good explanations. He has two daughters, he's told us, and he tries to teach them advanced mathematical concepts. They're like nine years old, so he's practiced trying to simplify these things down.

Several students also appreciated instructors that approached the material in fun and novel ways. They appreciated interactive teaching or any method that included something other than just note-taking lectures. Jacques had a positive experience with a

French teacher who employed novel techniques to get students to learn French and proper

pronunciation:

> We would watch a French music video, and he had transcribed into the
> international phonetic alphabet, all of the song, so you could read it as they were
> singing it. Then we would sing it with the video, and that was a really fun way to
> be engaged and still be focused on making the right sound.

> Regardless of class size, several students noted that they did poorly in classes

when they were not engaged with the material and it was difficult to motivate themselves

to do the necessary work. Patrice said she found those courses challenging but she

employed a "grin-and-bear-it" approach by forcing herself to participate:

> I think one of the biggest challenges is trying to engage in a class that you are not
> necessarily fond of or a class that you have to take. I had to take geology, and I
> hated it, every single second of it. But I trucked through and I stuck it out. I went
> to every class and paid attention, and even though I didn't like it, I still got the
> credits for it.

Devi, however, argued that success in classes was rather simple. He understood that

students face challenges but believed that success in the classroom is very

straightforward: "I think the easiest one would just be do your homework. You go to

class. Do your homework. That's it. There's no secret."

> Earl talked about the importance of connecting with the course material and being

a good student by engaging with the information in class:

> Most of the classes I struggled with were just courses that I took at the time where
> I thought I was invincible and could basically do everything all at once, you
> know, work a lot and take classes a lot. So the classes I usually struggled with
> were ones that I just didn't have a real connection with in terms of they weren't
> really motivating for me. Like a Greek history or something like that wasn't too
> motivating for me, or, I mean, a biology course even was a real struggle for me.
> So, they weren't like real difficult courses, but they were just courses I felt I
> wasn't able to really connect with because I wasn't putting as much effort in as I

needed to as a student, as you should be, I should say, so I was really just going through the motions and never really connecting with the information.

The students employed a variety of techniques to keep themselves motivated in the courses and remain academically successful. Several of them talked about turning their homework into a game or setting up contests with roommates or friends. Tariq enjoyed the competitive environment among classmates in the Business College. He was thriving off the desire to be better than his classmates and earn the highest grade possible:

> I would say competition was a big part of doing well in classes, my major. Everything's graded on a bell curve, so if you want an A, you need to work really hard and not just be good at the material but be better than other people.

All four student areas of the Persistence Pyramid, economic, social, psychological, and academic, had persistence factors that emerged as relevant to this group of low-income students. They perceived these themes as having a definite impact on their ability to persist. In addition to the student factors, the Persistence Pyramid has four campus factor areas related to issues of persistence.

Campus Support Factors

The Persistence Pyramid contains four campus-based areas of persistence factors that align with various camps support services and resources that are intended to assist students in persisting to the point of degree completion. These four campus support areas include: (a) educational and curricular support, (b) support for diversity and community, (c) involvement opportunities, and (d) a caring culture. Most of the low-income students in this study enhanced their chances of persistence by utilizing various campus support resources and participating in engagement opportunities offered by the institution. As a

result, each of the four campus factor areas in the Persistence Pyramid had themes of persistence that emerged as particularly salient to this group of low-income students.

Educational and Curricular Support

The first of the four campus factor areas in the Persistence Pyramid is educational and curricular support. This group of low-income students used a variety of tutoring, advising, study skills courses, and other support services and programs designed to enhance retention and persistence. Under the umbrella area of educational and curricular support, four themes emerged as particularly relevant to the students' perception of their persistence: (a) advising and career services, (b) tutoring and course support, (c) special programs, and (d) unawareness of resources. Of these services and programs, advising appeared to have the greatest impact on the largest percentage of students, but that experience was not uniformly positive.

Educational and curricular support: advising and career services.

Low-income students in this study had wide-ranging experiences with advising but virtually all of them found advising to be very important or at least influential on their academic careers; unfortunately, some of that influence was negative. Over half of the students emphasized the importance of advising on their ability to persist and most of those were positive. Patrice summarized this sentiment by stating, "Definitely advising is so important that I can't think of anything more important than advising." Leah provided a specific example where her adviser's intervention maintained her progress toward degree. She indicated that it was her adviser's encouragement that stopped her from withdrawing from a class and delaying her graduation:

When I had that class and I was failing, I was like, "Can I withdraw?" And she was like, "Yes. But, you know, this and that," and she helped me. She actually convinced me to stay because I was going to drop it and she was like, "I think you can do it. You're very smart." She gave me confidence too. So I think she helped, she gave me something that I don't think I would have gotten if I hadn't gone to her. I think that advisers are really good in terms of inspiring you to keep going. They don't just let you make a decision. She didn't let me just be like, "Okay. You want to drop? Drop. Here you go. Here's your paper." She would talk to me about it and let me really think about what I was doing and the consequences and the value I could have in just continuing.

Sheldon indicated that his honors adviser was one of the most helpful people on campus that aided his persistence to graduation:

My honors adviser. For the last two years now, I've only been required to do one meeting a year with her, I think for just academic advising. But I usually see her once, maybe twice, a semester just because she's a very knowledgeable person. I go to her and get advice about different things, like when I was trying to figure out, "Do I want to do grad school? Do I want to work? Do I want to do a teaching license?" different things like that. She's just someone to bounce ideas off of. She got a major in math, and now she's an academic adviser, so she knows how the system works. I think she was even in grad school for math for a while. So just a good person to talk to. I love the honors advising compared to how [College of Engineering] advising was. They make longer appointments, so you have time to sit around and talk about life and stuff. I've had her for an adviser for three years, so I just got to know her a bit better. It's just a much more personal interaction that I haven't had with any of the professors really, so she's probably the person I go to if I'm having questions about what I think I should do.

Earl developed a positive personal relationship with his adviser that he credited with his success:

My first adviser, he has really been helpful for me. He's always been very supportive of me in making sure I get my applications in on time or always checking up on me. It seems like every time I see him, it's always a welcoming "Hello" or something like that. So my first adviser I'd have to say was very helpful in making sure I'm doing well, and making sure I'm on task. Even when I was struggling my sophomore year, he was always encouraging to me, "what ways we can develop me a little bit better, or what ways we can fix everything." So obviously my adviser was very helpful in getting me straight and narrow and getting me on track again.

Other students emphasized the basic utility of advising in helping students stay on track for graduation. Gloria noted that she was required to meet with an adviser as part of the Post-Secondary Excellence (PSE) program and she recommends that all students should be required to meet with an adviser to ensure that they remain on track:

> When I was in [PSE], you had to meet with your adviser two times a semester. Now that I'm not in [PSE], you don't have to actually meet with them unless you need assistance basically in figuring out your schedule. I think it should be required to see your adviser before you register. So advising is definitely important, and especially since they know exactly what order the classes need to be taken in, the pre-reqs for it. So that's important.

Devi implied that his adviser also contributed to his academic success. He reported that of the services provided on campus, his primary resource was his adviser:

> I used mostly the advising services. My adviser, she was pretty amazing. I love her. She was really helpful as a freshman, and she was part of the reason why I was successful, I guess. She helped me plan and all that.

Unfortunately, not all students had such a universally positive experience with advising. Almost half of the students had at least some negative experience with advising, but at least half of those with a negative experience, also had positive experiences with advising. Some of their negative experiences included unsuitable advice, lack of encouragement, and dissatisfaction with being assigned a new adviser. Jacques had a pleasant experience with his honors adviser but she ultimately did not meet his needs. He was overwhelmed with all the options she gave him. He needed help with decision-making and she did not recognize that she was exacerbating the problem:

> I think there could be room for growth in the advising area. My honors adviser was very knowledgeable, but I think any time I would ask her about something she, rather than like help me pick an option, she just threw every option that is ever available to me ever and put it on the table and was like, "You could do this. You could do this. You could do this. This is also here. That's super cool. I've

heard a lot of people liked this." I am a super indecisive person, so she was really excited, so I was like, "Oh. That sounds awesome, but I don't know how to pick it." I mean part of that was probably my inability at the time to say, "I don't know how to make a decision, so if you could help me do that, that would be great."

Adrian disliked how often his adviser changed because the adviser changed jobs or switched departments, which made it difficult to form a relationship with that individual. He perceived that situation as an uncaring university which made him feel apathetic:

> I had a different adviser every year or every semester, so you really didn't get to have that same sense of connection of I could talk to this one person. It was like one day it could be Person A, and tomorrow it's going to be someone else. So I was like, well if they don't care, or the University doesn't care, why should I care about it?

Adrian also disliked the switch to faculty advising once he declared his major. He perceived the professors to be too preoccupied with other responsibilities to be able to effectively engage in advising:

> And then upper division, they decided to go with professors for it. And the professors, like I said, they have classes, proposals, everything under the sun. So they're extremely busy, so they don't really care. I don't think that having an adviser in that regard was very helpful. They ask, "What do you want to take?" And then you told them, and then, "Okay. You can go sign up for them now." That was the advising sessions.

Lee-Lee also avoided advising because her adviser changed each year. She was apprehensive about telling her story repeatedly and getting to know and trust a new adviser each year. Thus, she would only seek advising in a crisis situation:

> I don't know [about] other people or other colleges, but my adviser, they have changed it. I have a different adviser from my first year and second year and third year. So they change it a lot. I just kind of feel uncomfortable to talk with another person in the next year again, like a new person. I like to talk with the same person for myself. If it's not emergency then I'm not going there.

Jenny was also dissatisfied with her relationship with advising because her adviser

changed frequently. Although she was not particularly hampered by her lack of an

advising relationship, she inferred that her roommates were hindered by the lack of

involvement with advisers:

> I'm not a fan, I didn't have a good experience with academic advising just
> because in my first three years of undergrad I had three different advisers. That
> made it difficult to form a relationship with someone, and to be able to go talk to
> them about registering or graduation. I'm on the side that I didn't have any
> hiccups on my way, but then I look at my roommates who aren't graduating this
> year who started the same time as me. I think the lack of involvement from their
> advisers. I think it would be helpful if advisers kept in touch more with their
> students to push them and keep them on track.

Serena decided to avoid advising after a bad interaction she had with her adviser:

> After having had a negative experience, I didn't really use the adviser services
> anymore because I felt like people were Negative Nancies trying to crush dreams.
> I'm like, "My dreams will not be crushed." I was going to do this. I understand
> that advisers are there to like keep it real with you and lay out what is going on.
> Especially after, to have not done well in a class, I can see why they are like,
> "Maybe you shouldn't do that."

Serena recommended that faculty and advisers provide a lot of consistent encouragement

to students: "So it's instilling within students that they wouldn't be here if they weren't

smart. So just remembering that through the ups and downs, giving them that, reminding

them that they are capable of being here."

Several students mentioned they appreciated the assistance they received from

career services on campus which can help them feel connected and confident, as well as

provide them with an envisioned hopeful future which may encourage them to continue.

Leah explained that the career services office provided her with the tools to begin her

next steps in the career process: "I went to them to help me with my resume and that was

actually very helpful because I had no idea how to make a resume. They gave me templates and they gave me action words and stuff." Suresh also valued the career preparation that was offered:

> I was going there for mock interviews and [prospective employer] interviews and stuff like that. I think it's really, really good that [the Liberal Arts College] does have that where you can go and register for mock interviews, get that knowledge, and understand how to be professional as compared to just being a college student.

Tariq received his career support via a career class which he found valuable in preparing for his future:

> I think as far as being successful, being forced to take a class where I learned how to make a good resume, a good cover letter, doing company research, be a good interviewee. I think that might have been the most important thing that I've done so far as actually being able to get a job, and I think that's something that everyone can benefit from because everyone's going to need a job.

Although not all the interactions were positive, these low-income students noted the importance of using advising and career services. Advising and career services were only two of many forms of educational and curricular support services in which these low-income students took advantage of what was offered by the institution.

Educational and curricular support: tutoring and course support.

The students utilized many of the typical educational and curricular support services on campus that are designed to help them be successful in their classes. Tutoring and the writing center were mentioned frequently as having a positive impact on students' academic success. Several students indicated that they wished they could have spent more time with the tutors or getting other forms of help but demand from other

students needing assistance prevented students from receiving unlimited support. Lee-Lee

found the writing center particularly helpful as a non-native speaker of English:

> The writing center I went there a couple of times. It's helpful, especially I'm not the native English speaker, so they can like help my grammar, my writing, the grammar stuff and structure, sentence structure thing. So I think they are pretty helpful except the schedule is kind of busy. Because especially around the final exams, they just don't have time, they're just like full. But it's okay, I can understand because around that time all people need help.

Gloria participated in a Peer-Assisted Learning program in her Organic Chemistry class

which she attributed to assisting her in successfully completing the course:

> I started going to those every week, and I think that really helped out, you just have to keep up with it. It's a lot of reading. It's a lot of studying. You have to go over it and over it again. And three days a week one time on the subject is not enough. So I think that those classes take a lot of self-discipline, but if you don't have that, then you can't really succeed in that class. I ended up doing well, but it was just really hard to get through.

> Makeda noted that many students struggle with certain courses, especially some

of the math and science courses. Although there are tutoring and study skills courses

available, she suggested that the University provide more assistance to help students pass

those courses as well as other recourses to improve their performance on exams and in

their classes:

> The biggest obstacles students have to face is like passing their classes especially like the science courses. So, I guess have some kind of resource that help students pass that class, like how to get a better grade, how to like study for these classes. That would be really helpful. It's just like any resources to help students with studying for the classes, tips to pass your classes or pass your exams.

Gloria had some difficulty understanding the accents of the tutors provided by the

tutoring center for her advanced science courses.

> In general chemistry it's fine, I can understand the tutors, and everything makes sense when they teach, when they show you. But as it got to more, like O Chem,

like more difficult chemistry, they had accents and I'm like, "You are speaking two different languages. You're not only speaking chemistry right now, you're speaking whatever languages you're speaking." So that didn't help it very much.

Several students engaged with educational support services that were delivered via a study skills course or similar type of developmental course. Serena noted how much a study skills course improved her ability to be successful in college:

One thing that helps, I took a study skills class, and that definitely helped. Meeting with some of the academic counselors, that helped me get back on track and get myself organized because I used to be all over the place when it comes to school. That was honestly one of my favorite classes that I've taken. Just to analyze my study skills and test-taking anxiety, and all that kind of stuff.

Yvette also had a positive experience with a study skills course. In particular, it gave her skills to improve her test-taking abilities:

That was really helpful. It opened up my eyes to things I could do to do better. It introduced us to different ways of studying, and it showed me how to make these flash cards that taught you how to learn objectively. So when you take these multiple choice tests, you can better think up the solution to the problem.

Earl did not have a study skills course but he recommended that the University create a developmental course to teach students how to be effective college students:

Learning those early key steps of education has really helped me develop into a student that has been able to be successful. Being able to write papers properly, being able to write evaluations, learning those small key steps about how to be a successful student has always been helpful and being able to use those in college. Being able to interpret information properly has been a real key to my success, so just learning those basic skills has been very important to my educational career. It would come down simply to having a class on basic skills. Maybe a freshman seminar on how to be a proper student.

Educational and curricular support: special programs.

Several of the students participated in a summer bridge program the summer prior to their first year. The two students who participated in the summer bridge program

connected to the Engineering School had extremely positive things to say about the

experience and the assistance it provided to their ultimate persistence. Saulo listed the

program as the top contributor to his academic success:

> I would say the number one thing was participating in the summer program. It's just called Summer Bridge. I spent two months here where we lived in one of the dorms, and all of us were incoming [Engineering College] students, so we all were taking a math class. The program was scheduled around just getting you ready for starting out the upcoming fall. There were a lot of workshops, [such as] the differences between high school [and] college. What can you expect? What things are available at the University for people who coming out of state. How do you succeed in your entry level physics, chemistry and math. How to get involved in research and actually getting to talk with professors. So Welcome Week was kind of just repeat, but that's because [of] how well they prepared me over the summer and just getting used to what it's like living in the dorms, doing my own laundry now, getting my food, and stuff like that. It wasn't in the stress where everyone is crowded in. It's just a group of us, we all got to meet each other, become friends.

Adrian also derived great benefit from the Summer Bridge program from the Engineering

College:

> I did the Summer Bridge program at the University. I took Calc 1 and you spend time with 19 other freshmen who are also in [the Engineering College] and kind of make a friend group before the [Fall student-athletes move in]. Plus, you get to figure out the campus before you're a freshman, so you don't get lost to every class.

Several other students also mentioned programs and services that were geared

toward students of color or underrepresented groups. Yvette seized the opportunities

presented by several of these services. She derived great benefit from a program that

matched her with a faculty mentor:

> I was a part of this program called the Presidential Mentor Program where they set you up with a mentor, and it's usually a multicultural mentor or someone of a multicultural background. So that was really helpful. So like the different programs that they have were really like helpful for me, so that I enjoyed.

Yvette also appreciated a multicultural center on campus that provided tutoring, free printing, and other forms of support. The center is open to all and is frequented by many first-generation students and other underrepresented groups:

> The [multicultural] office, I really like that. There's a lot of nice advisers there that you can always stop in and talk to and catch up with them. They usually remember who you are, and things like that. They have different services that are really helpful like the printing and things like that.

Even though Makeda did not participate in Upward Bound, a pre-college program for low-income and first-generation students, she still received some benefit via her high school friends that participated:

> They participated in Upward Bound, so they knew around campus, so they would help me out. I would call them and say, like "Where is this? Where is this?" They would tell me about the writing center and the tutoring and all that, so that was helpful.

> For Makeda, having classes with the same students her first year was helpful for

making friends and creating that sense of connection. "When you are in [PSE], your first year all the students have the same classes with you, every single class. I made a lot of friends through [PSE] because we saw each other everywhere." Gloria noted how helpful her entry program, PSE, was to her success even though she was incredibly resistant to being placed in the program initially. Some low-income and other underrepresented students resent being placed into programs where they believe that they are being stigmatized or labeled as inferior even though these programs may have superior resources that can be utilized by the low-income students in order to succeed.

> Well, I think that being in [PSE] my freshman year really helped out. I mean, I feel like at the time there were some really negative thoughts about it. Like, "Okay. I'm not good enough. I have to be in [PSE]." But it wasn't that at all. Like now that I reflect on it, it's like they were telling you to go to the writing center to

help you with your writing. They would, I think that they showed us a lot of opportunities and a lot of those resources, and they would make it a point to be like, "Okay. You have to go here, get a signature," just so, just to make sure that you know where that is, so you know that that's there.

Students who started in the Life Sciences College began their first year by spending one week in in the woods, camping at a state park and participating in an experiential learning experience. Lee-Lee enjoyed the experience and claimed that it helped her transition into college and make her first friend:

> I liked it. And even though I don't like the woods, I liked the environment, the attitude of it, because [it was] the most relaxed course I ever took. So they kind of start our freshman year earlier than other people. But I had my first friend over there, first friend in college over there.

Although some support programs were viewed as elitist by some of the students involved. In particular, about one-fourth of the students started in the honors program, but about half of those were removed from the honors program for not maintaining a cumulative GPA above 3.5. Yvette initially started in the honors program but was dropped when she did not maintain the required GPA. As she reflected on her time in honors, she noted that her other friends did not receive the same level of support and services that she and other honors students received. Yvette critiqued the disparity from a social justice perspective: "It was just weird to me that it seemed like the honors system was designed to help good students do better instead of helping students who may not have it all."

A few of these low-income student also participated in particular educational support programs in the residence halls, but not all of those experiences were positive. For example, Tariq was in a living learning community, which he found helpful in providing an enhanced educational environment:

My freshman year, I was in the [Business College] Living Learning Community, so most of my friends are [Business College] students. Being around a lot of people who are finance majors also helped because if they were stuck on anything then, other people would know.

However, Yvette was part of a living learning community and neither she nor her fellow classmates on the floor were even aware that they were in a special learning community:

I was a part of like the Spanish Living and Learning Community. I still had that love for Spanish when I graduated from high school, so I was really excited that on the internet it said that, "This a Living Learning Community where everyone is going to speak Spanish and improve their Spanish skills," and things like that. So I was really excited, but then no one spoke Spanish. First we didn't even know if the people were a part of that community. We just mentioned it, like, "Oh, yeah. We're supposed to be part of that." "Oh. I was too." "Oh. Maybe this is that community." Then the person who was the CA on our floor who was in charge of that Spanish floor, our CA on that floor was actually a French major.

As a result, the living learning programing occurred and the students did not engage with each other around speaking Spanish or anything related to Spanish, which was a disappointment to Yvette who chose this program over other living-learning community housing options.

Although most students in this study derived substantial benefits from the educational and curricular support services, students often needed encouragement and a specific reason to participate in particular support services. Students mentioned repeatedly that they wished they would have known about a particular service sooner. Leah displayed her enthusiasm for the writing center which she would not have used if an instructor had not required her to go as part of a course:

I never used the Writing Center until I took this Bible Study class. She said she would give you extra credit if you went because I never went before. And it was actually something that I liked. It was surprising how much they helped because I thought they're just going to be generic, and they're not going to really help me, but they're actually very helpful.

Devi implored future students to take advantage of the many resources on campus and

encouraged them to take responsibility for utilizing them:

> You have to self-actualize. You need to self-motivate yourself. There are
> resources. Use them. I used some of the resources. Ask for help. Ask for help.
> That's what we teach all my clients to do. Ask for help. So even as a student, ask
> for help. Email your adviser.

Several low-income students indicated that participating in Welcome Week, a

week dedicated to introducing them to the resources on campus and providing them an

opportunity to make friends and become familiar with campus prior to their classes

beginning their first year, was essential to their ultimate success. However, several

students recommended that the University develop a method for reminding students of all

the resources throughout their college career since students cannot retain all of the

options due to the information overload experienced during that week.

Suresh asserted that most students would not preserve most of the materials they

received during Welcome Week so he urged the University to remind students and

redirect them to appropriate websites:

> After a year, how many students are actually keeping all those things that they got
> from that, probably not a whole lot. So, what can an institution, the U, do for
> having those students still remember that, "You got that stuff. If you need that
> help, you can go on that website or go to these services that are available for you."

Carrie shared such a sentiment that the University does a good job providing services but

needs to remind students of all that are available. She recommended sending e-mail

reminders about all the services available:

> Let them know the services you have. I know emails, we're bombarded with a
> million of them, but they help. A lot of people are not going to have that
> confidence to go up and search maybe a mental, emotional situation, and I know

we have services for that. I know we have legal services. There's a ton of things that can prevent a student from not graduating, but we, for the majority, I know have services for that, and they might not know.

Earl recommended that the institution provide a review session of the information covered in Welcome Week:

I know that they've been very successful in terms of Welcome Week, developing those peer groups and helping students connect with other individuals that may not be in their major has always been helpful. Continuing in that aspect, just have a review session of what you learned during Welcome Week.

These low-income students participated in a wide array of educational support services and special programs. Even with their effective participation, many of the students indicated that they would have preferred to use the available resources even earlier and more frequently.

Educational and curricular support: unawareness of resources.

Over half the students made comments about not being aware of all the resources and services available. They made numerous comments about how beneficial it would have been to know about a particular resource or service offered by the University. Several of the students noted that although they had received information about particular resources earlier in their college career, they were not getting the information at the moment they were ready and able to receive and act on that information.

As one of their top recommendations for actions that the institution could take to improve graduation rates, several students specifically suggested that the University provide better information about resources and services. Makeda explicitly made such a suggestion as her top recommendation for the University:

I would tell them about the resources around campus because you know professors, they're there to teach you about, you know, the class you're taking, not the resources. So I'd just like provide a student or someone from the University who's hired just to like inform students about resources. Like I know a lot of people like come into my class and tell us about information around campus. So it would be really helpful to have like people come in class and tell them about the Writing Center, the Tutoring Center, the Career Center because I know like the Career Center, I didn't know about it until junior year. So I mean that's really a long time. Freshman year would be like a good way to like know about all these resources.

Saulo also postulated that persistence rates for students could be improved if students were aware of all the support programs the University has to help them succeed academically and students fully utilized those programs:

I mean there are a lot of programs available and I feel people don't take advantage of them, and that's why they might not make it through, so I mean, it's there. People aren't using them, so I think my recommendation would be just make those, make people aware of those things.

Adrian encouraged the University to upgrade the modes of communication that is employed to get information about resources, programs, opportunities, and other academic information to students. In particular, he suggested that the University improve its attempts at employing social media to get messages to students:

Don't be afraid to embrace technology where we're going to respond faster to a text message or a Facebook message than we are to a flyer or an email or something along those lines or for sure something like mail. I don't remember the last time I checked my mailbox. If you want them to see it, go to Facebook. Go to Twitter. Or whatever the latest social trend is at that time. Text messaging is nice.

Yasir noted that there is a great deal of information but actual access and application of the information is not as easy or readily available as University administrators might assume:

I found out in the U.S. that actually having access to information is really difficult. There [is] a lot of important information outside there, but if you have

someone who just give you those information, it is the most helpful thing, but if you just struggle all this through by yourself, you are swimming into hell, and it's really hard.

Carrie suggested that introducing new students to a few resources can have an exponential effect if they take advantage of them and learn about additional resources in the process: "Just by being involved you find out more resources. So getting out there initially has that effect, like you reach out to one person, you're given resources for like five, and you can keep going."

Yvette suggested that the University was making efforts and students bear some responsibility for using the support services. However, she also questioned whether the University was encouraging and welcoming enough in their support services.

I think they do a good job of like trying to make sure students stay here. They have a lot of different services that they offer, and they're free to us, so I don't know, I think they do kind of a like a good job. It's just up to people to like go out and use them. So maybe like the University could do a better job at encouraging students to go use them, and not making them feel scared to go use those services. I just had apprehensions about going to use like tutoring services and things like that.

Other students complained that they were uninformed about all the programmatic and curricular options available at the University. Serena claimed that she would have made other decisions if she had been fully aware of all of her options:

Now that I'm nearing the end, I realize how many opportunities were available. There's a lot of things that the U really doesn't tell students about. You have to find out on your own. If I had known what I know now, a couple of years ago, I think a lot of the decisions that I have made, even as far as classes, would be a lot different.

In addition to resources, services, and curricular options, a few students also mentioned wishing they understood various academic policies and requirements better.

Jacques said he wished he had understood the A/F versus the S/N grading options sooner.

He had one semester where he was taking all of his classes, including ceramics on the

A/F scale. As a result, his other classes and GPA suffered because he did not take

ceramics on the S/N option:

> I think the biggest thing I wish I had known is honestly taking classes pass/fail
> because I think like looking back on it, if I had taken that ceramics class pass/fail,
> my life would have been a lot less stressful. I still would have, put a lot of work
> into that class. It's ideal to enjoy it a lot, but it was very time consuming for
> something that was supposed to be just for fun.

The University of Midwest provided these low-income students with numerous

educational and curricular support services. The students indicated that these services and

programs were helpful in their journey toward degree completion, but they would like to

be better informed of all their resource options.

Support for Diversity and Community

The second of the four campus factor areas in the Persistence Pyramid is support

for diversity and community. Under the umbrella area of support for diversity and

community, three primary themes emerged as particularly relevant to the students'

perception of their persistence: (a) diversity support, (b) sense of community, and (c)

campus identification.

Diversity support.

University of Midwest is a Predominately White Institution (PWI) with

approximately 18 percent domestic students of color and 8 percent international students

at the undergraduate level. Student experiences around issues of diversity varied

dramatically among students, especially for students of color compared to White

students. Even among students of color, there were notable differences. As a result, four

distinct sub-themes emerged under the overall theme of diversity support: (a) experiences

of students of color, (b) campus resources, (c) recommendations for enhanced support,

and (d) perspectives of White students.

Diversity support: experiences of students of color.

Almost 60 percent of the low-income students in this study identified as students

of color. Although all but one of them indicated a generally overall positive experience

with their undergraduate education, many of them had numerous negative experiences as

a person of color on campus. Some of these experiences were specific incidents in which

they did not believe that they were being treated as equal members of campus, but many

of the experiences revolved around the feelings of isolation and self-doubt that arise from

being in an environment where they find themselves to be the lone student of color in

many situations, in addition to being a low-income student.

Several of the low-income students of color noticed a lack of diversity on campus.

Although they all noted some degree of diversity on campus overall, they were still

impacted by the predominately White campus that resulted in classes or in majors that

were composed of mostly White students. Yasir noticed a lack of Black students on

campus: "There's not a lot of Black people in this school, there's something that is still

missing." Adrian also noted: "I do see sometimes that it's a little low, especially in my

major or other engineering fields. I mean for my year, I'm the only African American

student in all of my classes." Serena felt very isolated in the Business College:

> Diversity needs a lot of work in [the Business College]. A lot of work. I was
> looking at a report from 2006 to 2010, the amount of African American students,

Asian students, including Islanders, Native American [students] that have graduated from [the Business College], and it's so small.

Serena argued that the Business College needed to strive harder for greater inclusion of diverse students and staff members: "Even the person who's the head of the multicultural diversity program is a White male. If this is a multicultural program, shouldn't there be somebody who's a representative of the students who are multicultural?"

Several students of color found it particularly disconcerting to routinely recognize that few, if any, other students of color, were in their classes. Serena illustrated: "When I'm in a class and there aren't a lot of people who look like me, then it's like, 'Oh. We're not here.'" Serena explained that this level of discomfort can be even greater for those students of color who were raised in communities of greater diversity who may be unaccustomed to environments that are predominately White and thus may be at greater risk of not persisting:

> I'm used to this kind of representation, but seeing students who came from [the urban core], it is a shock. It's a really big shock for them to see like, "Okay. Why am I the only one who looks like this in this class?" And then that makes them draw up within themselves, like, "Okay. Are people judging me?" Or "What do they think about me?"

Several students emphasized that the predominately White demographics in the classroom were a distraction from learning and presented a mental hurdle for the students of color. Yvette was so overwhelmed by these feelings in large classes that she was unable to concentrate and it negatively affected her grades in those classes:

> I didn't think that the large class size was going to affect me, but then when I walked in and I would be in these large class sizes and there was no one like me, it was really hard to kind of fit into the classes. I still had the desire. I would still study hard, but it was just mentally my mind couldn't focus because there were so many other things I was worrying about.

Makeda indicated that these feelings of self-doubt and self-consciousness were common for students of color on campus:

> Sometimes I get intimidated when I'm in class, and I'm this only single Muslim Black person in the class. A lot of my friends also talk about that, that they feel like they don't belong in that class when they're the only Black person in class.

For some students of color, these feelings of self-consciousness can be simultaneously isolating as well as adding extra pressure to perform or even to attend classes. Adrian and his classmates noted that he did not have the luxury of occasionally skipping class:

> All of our classes are so connected, where we see each other in every class, and everyone makes the comment like, "Oh. I guess you have to be there because we would know if you're missing." And I know they're joking about it, but at the same time, I do stick out in the classes.

Leah illustrated her perspective from the viewpoint of a student of color that was feeling isolated and disconnected from the majority of other students on campus:

> I wasn't taking the classes that other minorities like me were taking. I was taking classes that seemed to have more White and more wealthy [students]. So they had other privileges that I couldn't understand. So it was taking some time to get used to.

Leah was upset that these wealthier White students appeared to be unappreciative and unaware of the benefits and opportunities that were available to them:

> I think a lot of the students here made it here because they had the money to be here. There's lots of people that I know that are smart enough but have to start at community college because they can't afford it because of certain obstacles, and so I feel like they should be more grateful is what frustrated me.

Yvette indicated that she had some classroom challenges in smaller classes and

with other students and lab partners. She and other friends from an urban school were

high achievers and then were frustrated that their classmates on campus discounted them:

> Students I graduated with, we were all at the top of our class, and when we get
> here, everything was really hard, just because it was really hard to communicate
> with people. Like working in lab with chemistry [and] your partner doesn't really
> trust anything that you do, and things like that. You can't really learn in that
> environment.

Yvette struggled through a discussion-based course where students frequently made

racially-ignorant comments:

> It was 25 people and I was the only Black person. So every day we'd sit in this
> circle and it would be awkward. It was just a really uncomfortable class especially
> when comments were made that I know that person didn't have bad intentions or
> anything, but people were either sheltered or they just really don't know what's
> going on. People just kept saying things and I felt like I wasn't even there.

She was especially troubled by the lack of intervention on behalf of the professor:

> Actually the most challenging part was that the teacher didn't really acknowledge
> it. He just let their comments go by without giving any kind of constructive
> criticism or opening their eyes to a new perspective. I was pretty much frustrated.
> I kind of shut down.

Suresh conveyed that he had very few negative interactions with other students

around diversity and he believed that the other students simply had little experience with

students from other cultures and may be slightly ignorant about a particular topic but had

no malicious intent. He relayed one such incident during his first-year orientation:

> I remember my orientation, I was walking with people going back to [the
> residence hall] and these two people just walking, and they're like, "Oh. By the
> way, I want to tell you something." I'm like, "Sure." "Yeah. Your English is
> really good. Where did you learn?" I'm like, "Well, first of all, yours is really
> good too. Where did you learn?" And they felt that I was attacking them, and I
> was like, "Okay. I didn't mean it in that way, but you know what? I'm from India,

you learn English from kindergarten, so it's not that English isn't good. It's just part of the culture now."

The students who were more recent immigrants, some of whom could practically be considered international students, viewed the campus diversity in generally positive terms. Lee-Lee noted the large variety of students that could be seen on campus: "I think our university supports diversity. If you just walk around the campus, you pretty much see all the races in the world." Although Hank immigrated at a young age, he also thought that campus had a good mix of diverse students:

> I think diversity on this campus is great. I'm able to meet a lot of international students from China, Taiwan, and Vietnam. So it's great that I have a lot of friends, national or international. I think this campus has a huge number of diversity backgrounds.

However, Devi noticed that there was a lack of association and socialization, especially in the classroom, between domestic White students and the international students: "In [the] classroom, for example, there's a disconnect between the Caucasian students and the foreign students that come here. There was less interaction between those two groups in my observation."

Similar to the students' diversity of perceptions of campus and the support for diversity, the low-income students in the study also had diversity in the ways that they constructed their ethnic and racial identities and the significance that they attached to those racial and ethnic identifications. Yasir closely identified with any African immigrant or any African international student: "I see myself as Pan-African, meaning, I don't have a specific preference, a particular community, because I see myself as African. I don't see myself as Kenyan or Ethiopian or something. I just see African."

Leah was the only student in the study who self-identified as multi-racial. Leah argued that she never felt fully connected to a particular group of students based on her race or ethnicity. As a result, she assumed she would not be completely accepted in either community and thus did not join any student groups:

> I never joined any. I would have if I was one race, but because I'm multi-racial, I couldn't join the Lao Student Association. I know lots of people in the Lao Student Association, but I never really joined it. I've gone to some of their events, but I've never really become a member because of the fact that I'm also Puerto Rican. I would go to La Raza. There's no place for me to blend. That's the way it's been all my life, and I'm very much used to it, and I don't really mind it too much. I like to bounce back and forth between the two rather than try to force myself into one. I'm sure I would be welcome, but there would always be a part of me that would be like, "I'm not complete, I'm not full Lao," so they're looking at me like I'm not full Lao, and there's a certain treatment that would come from it. So I've never joined a specific group, but I've always tried to be in each. I can see why full Lao people, fully Hispanic people, would need that to feel like they can have a community, but I never felt like I needed that because there was always this disconnect between the two for me. So I never had a real group.

The degree to which the students considered their racial or ethnic identity construction as a salient feature of their identity varied from one student to the next. Hank did not consider his ethnicity to be an essential factor in his identity:

> I never see myself as a diversity person. I'm not sure why. I think it's because I try really hard to fit in with the American society. I immigrated here at a very young age, so I grew up in a very American kind of lifestyle. I really enjoy sports and stuff like that. So I never used any of the diversity resources here.

Tariq was more aware of the demographic homogeneity in his College but also did not participate in multicultural activities. Tariq noted that he did not witness much diversity in the Business College: "It's not super diverse. It's mostly foreign exchange students from China, and then White people from [wealthy local suburbs]." Tariq asserted that he

was not bothered by the lack of diversity: "It's never been a huge deal for me because I play sports and my hobbies are pretty similar to most people who are in college."

Clearly, the low-income students who were also students of color had some negative experiences related to diversity. They wanted more students of color on campus and wanted their fellow students to have a better understanding of diversity and improved intercultural competence. However, they also recognized some positive efforts by the university to improve the situation for diverse students.

Diversity support: campus resources.

All but one of the students of color in this study had at least some positive things to say about the University and the support for diversity and diversity resources. Many of the students of color mentioned the many student organizations on campus that were focused on various students of color. Several of the students praised the University for its support of these organizations and other resources that were provided for students of color. Makeda stressed the importance of having this connection on campus:

> There's a lot of other African American groups here at the U and [a] Somalian group. I think that's really great. I'm from Ethiopia, so when I go into that group, I feel connected more. You feel connected to your community while you're at the U, so that's really important.

Saulo asserted that the University provided many resources for students of color:

> I believe that we do support diversity because I'm an example of that. I feel that the programs I was involved in through the University are what has allowed me to reach the level I'm at now. The fact that there are a lot of opportunities for underrepresented groups to succeed is amazing to me.

Sometimes even relatively small gestures on behalf of the institution can go a long way in demonstrating to students that they are welcome on campus and a vital part of the educational community. Makeda illustrated such an effect with the inclusion of a prayer room:

> They provide a room for you when you need to go pray. So that's very helpful. Even though I don't participate in that group, as a Muslim, I know other people would want to go into that room and use it to pray.

For some low-income students in this study, their student jobs, especially on-campus jobs, connected them with resources and experiences that also were related to diversity and connected them with their own background as well as the diverse background of others. Leah noted that at one of her jobs: "it was the first time I interacted with White people in a way that didn't feel uncomfortable." Through that job she become friends with a woman and they eventually became roommates and that was an opportunity for growth for Leah: "She was White and I ended up learning a lot about being White from her, and how White people think and stuff. So it was kind of a learning experience too." In addition, at her Study Abroad job, she had a co-worker who talked with her about culture and diversity issues:

> She's a program director, and she found out that I'm half Lao, so she likes to talk to me about Laotian issues, Vietnamese as well. So she makes it feel like there's a lot more diversity. And then there's also a few other people that it feels like you could talk about culture with. [Study Abroad], I think is very cultural, they want to know culture. So my boss also asks me about cultural things, and so you feel more free to talk about differences and similarities.

Diversity support: recommendations for enhanced support.

Although all but one of the students of color viewed the institution in generally positive terms, they also had suggestions for improving diversity support on campus.

They frequently urged the University to increase the racial, ethnic, and economic

diversity of the student body. Several of the students had additional suggestions for the

University beyond increasing the percentage of underrepresented students. Yvette

encouraged the University to not treat students of color like a monolithic group:

> I feel like the University, what they could do differently, is not overgeneralize the idea of multicultural. My fight is not the same as the next person, and so recognizing that there are differences among cultures-- there's all these different branches here, like this cultural group, that cultural group. They recognize them, but I guess when it comes to other things, different processes that people have to go through, they don't recognize the different individual plights that people go through. It clumps us into multicultural because the needs of African Americans are not the same as the needs of Native Americans. And they're not the same as the needs of people from India.

> Serena encouraged faculty members to help students of color combat feelings of

isolation and self-doubt in the classroom by reaching out to those students:

> I would say that it goes back to feeling the support, making students feel that they are capable and smart enough. As a teacher, showing that you want the students to succeed, and that they are welcome might have a lot to do with it.

> Yvette also took issue with the way the University recruited students of color to

enroll at the institution:

> I think the U wants a lot of students from different backgrounds here. I just feel like they do a good job of reeling people in, but then once you get here, I feel like they don't do a good job of keeping you here or trying to support that you're here.

Yvette worked in admissions so she was able to witness the marketing strategies first-

hand:

> When they recruit multicultural students, it seems that they recruit them giving this false impression of the U. When you see a pamphlet, and it has like, "Oh, there's two African Americans, a Latino and a White person. Look, there are so many people just like me." But then when you get here, it's a completely different ball game. I've rarely seen people in my classes that look like me.

Diversity support: perspective of White students.

The low-income White students in this study generally thought the campus was diverse and was supportive of diversity and most of them considered the campus diversity as a positive asset to the campus climate. Some of the White students took a minimization approach to cultural diversity where they approach equality as sameness and tended to minimize cultural differences between various students. Thus, they are unlikely to observe any racism unless it was blatantly offensive. Earl typifies the attitude of such students:

> I never thought there was any cultural issues or anything. We're a pretty open society here. Me being a White Caucasian individual from [the] southern [part of the state] is no different than an individual coming from Sri Lanka or something like that. I mean, we're all here for an education, and it's all an educational community. We're all here to learn and become better, so I never felt like anyone was disheartening or discouraging towards other individuals.

A few of the White students who came from very heavily White environments had some minor issues with the diversity on campus, but otherwise the students appeared quite accepting of their diverse classmates. Reese noted that she was initially uncomfortable but she was able to adjust: "Campus is definitely more diverse than my hometown and my high school. It was something definitely that I had to get used to in the beginning. But once I got used to it, it was fine."

Sheldon comes from a predominately White environment and compared to the other White students, his interactions with diverse students on campus came across as more negative. Although in his interview he seemed open to diversity, his difficulties overcoming language barriers resulted in more limited interaction with diverse students on campus:

I guess most of my experience is probably limited to lots and lots of Asians. The math and physics programs just had lots of Asian students, so it's probably where most of the international community [is]. And I probably don't interact with them a whole lot. I have a hard time, it sounds terrible, but I have a hard time understanding them, just the accent. I can't do Asian accents. They just talk, and I kind of hear garbles of like syllables that don't make sense to me, so I don't really interact with them very much.

Conversely, Sheldon characterized the campus as very accepting of a diversity of people and was comforted by such an atmosphere when he was contemplating coming out as gay: "When I was thinking about coming out, just knowing that in general you are not going to find a problem on campus. It's just a very liberal, accepting place."

Several of the other White students were excited about the diversity on campus. They wanted to meet other students from other cultures, but some of this perspective was still rooted in viewing non-Whites as the "other," as exotic or foreign. Patrice illustrated this well-intentioned but potentially offensive perspective:

I think this campus is great as far as diversity goes. There are different people from different countries that I've never even heard of that go to school here. It's really interesting to like learn about their culture and what life is like back where they're from.

Some of the White students previously lived in more diverse environments and thus expected their campus to be similarly diverse. Jenny came from a part of the state that had a more diverse population and had experienced such diversity from her previous school environments since she was a child:

The first thing that comes to mind when someone thinks of the University is diversity. It's something that the school takes pride in, and I can definitely tell it's a diverse environment when you're working with your fellow peers, but I feel like it was something that I was already used to. My hometown has a lot of diversity, so it wasn't a change for me. It just seemed normal. So it would have been weird if it wasn't diverse.

Gloria had been in a more diverse environment when she lived in Texas but that changed when she moved to a neighboring state in the Midwest for high school: "I love culture. I love variety. And then when I came up here, when I went to high school, it was 99% Caucasian, and then there were racist jokes going around every day, and it just didn't feel right." Gloria appreciated entering into the University's Post-Secondary Excellence Program where she interacted with a diverse population of students and had an opportunity to study issues of race and ethnicity:

> Really being aware of what I have and White privilege and being aware of my privileges and what I get over other people, I think that really started to set in, like, "Okay. I need to learn a different language. Okay. I need to see other cultures and see different things, so I can broaden my horizons and open my mind."

Devi recommended that all students embrace their unique identity and apply that self-knowledge to be successful:

> Remember what makes you happy and let that be what you do. Remember what makes you who you are. Know yourself. Develop that identity. Be proud of it. Work with it. You could be anyone, and you would still have problems. Being an immigrant and being Cambodian, I do encounter a little problem. I'm not as privileged as other people, but then again, that's my own unique set of problems. I'm proud of that. I'm owning that.

The low-income student in this study appeared to have different perspectives on the campus climate and issues of campus diversity depending on their identification as a student or color, a recent immigrant, or a White student. The students of color had strong recommendations for the university to address issues of diversity and increase the intercultural competence of their fellow students.

Sense of community.

Students indicated that they wanted and needed to feel a sense of community. Most of them were connected to at least one group where they felt a sense of belonging. Some students reported feeling a deep connection to several different groups or communities. Those communities took a variety of forms and came from a variety of places and parts of students' lives. Some of the groups were related to their major or a student organization. Some communities were connected to racial or ethnic identities or religious beliefs.

For the students of color on a predominately White campus, several of the students mentioned how important it was to have a place where they felt they belonged and could let down their guard from the rest of campus. Ethnic-based cultural centers or student groups served as a primary escape from the constant reminder that the students of color were in the minority. Yvette depicted the Black Student Union as a place where she could go to find community and simply relax:

> I sometimes just go up to the Black Student Union. That's a nice place because it's a comfortable environment. So you can talk, how you want to talk, and you don't have to worry about people judging you because you are using your vernacular that you would use at home or something like that.

Yasir also found his connection to other students of color through various student groups. He derived a sense of community from his participation in a variety of related student organizations where he connected with other students:

> There's African Students' Association, and Muslim Students' Association as well; I'm part of it. I always go to their event and I feel they represent me in a sense. And the Oromo Students' Association, Ethiopian Students' Association, Somali Students' Association, and all these, they promote the African culture and I feel I'm represented in a way.

Other students formed a community with their fellow classmates in their major, especially those majors that were more cohort-based, in which a group of students start at the same time and progress sequentially through a standard set of courses together. Saulo explained how his major served as a vital community for him during his last 2-3 years:

> I would definitely bring it down to my major just because we are a tight knit group here. [My major] is smaller and for classes there is only one section, so, we would all go from one class to the other as a huge herd. Because we are a smaller group, you actually meet and to get to know the people.

Several students indicated that the connections they made and the sense of community and support that they derived from their jobs was of vital importance in their persistence. Lee-Lee implied that her closest community was connected to her on-campus job and her co-workers in the lab.

> For on campus, I think I'm connected to my work group. Because besides class, the time that I spend is in the laboratory. The time that I spend in the laboratory is more than the time I spend in my apartment. So yeah, I think I feel connected in there.

Jenny also identified her work place as a primary source for a sense of community. She developed deep connections with her co-workers at her off-campus job:

> I feel connected to the Ronald McDonald House. I've gotten to know the staff really well, and a lot of the long-term families that have been there. I feel like it's kind of a home to me when I go. Everyone knows me. I've always just felt like I have a lot of support from all of them. The House Manager wrote me a letter of recommendation for dental school. I feel like she's always followed up and wanted to know how that process was going when it was happening.

Other students developed a sense of community from groups outside of campus, yet still derived critical support from these groups. Serena identified her church as her

primary community and articulated the myriad ways in which such a sense of community

helped her persist to the point of graduation:

> With the church that I go to, it feels like another family there. So I really feel a part of the community, especially when you go to church [on] Tuesday, Saturday, Sunday. So I'm there a lot. So just feeling connected to a lot of different people helps to get through. I know people are rooting for me, praying for me. So that really helps. In general, if you know people are proud of you and know you can do it, you get that extra boost. Just to have people that I can talk through if I'm stressed out, or don't think I can do it. Definitely, just having a group of people who are supporting me 100%, is really great.

These low-income students noted the importance of finding a community or

group where they experienced a sense of belonging. The nature of that group and the role

that such a community played in their lives varied widely among the students.

Campus identification and connectedness.

A few low-income students mentioned that they derived a sense of community

simply through the act of going to college and being on campus. Makeda had a sense of

belonging and community simply by attending the institution and feeling like a part of

campus simply by being a student. Makeda explained, "I definitely do feel like just being

here, and being a [Midwestern] University student, that makes you a community. When

you walk by here, I've seen people telling me like, "Oh. I see you on campus all the

time."

For some students that sense of identification with campus and the institution was

facilitated through participation in student groups or involvement in campus activities.

Sporting events were frequently cited as the top activity that created this resonance

coming from feeling connected to the teams, identifying with the mascot, and feeling as if

they are part of Muskie nation. Reese asserted that both sporting events and her

participation in student activities helped to build her strong identification with campus:

> I definitely feel like a [Musikie], and I've loved being a [Muskie]. And I think that's just through attending like student activities and football games and hockey games and just being involved within the student community definitely makes you feel more like a [Muskie].

Makeda agreed that the sporting events do help to build a sense of community on

campus:

> I know a lot of people say when they go to a football game, and they're sitting cheering the football game, even though you don't know the person standing next to you cheering, you still feel like they are part of your community because you all go to the same school.

Watching and supporting the athletic teams or other groups on campus can create

that feeling of community and connectedness, which can foster retention and persistence.

Even prior to matriculation, the reputations of certain teams or arts groups can encourage

students to enroll at a particular institution. The anticipation of cheering on the sports

teams and that sense of camaraderie is what attracted Hank to university in the first place:

> One other thing that really motivated me was when I was in high school, I watched a lot of NCAA sports, and I saw huge crowds. I really enjoyed the energy that the students had. The whole room, or the whole court was filled with a certain color, the school color, and that spirit. So I wanted that.

Once he matriculated to the University, Hank had the opportunity to participate in such

community rituals, which were very important to him.

> Coming to the University, I definitely got that experience going to the football games. Put on my [school] colors and stuff like that. I got a chance to [use] body paints with my friends. Try to go to every game that I could and request work off in the morning shifts just to go to every Saturday game. So that's something that I really, really enjoy.

Unfortunately, due to work and other time and money constraints, Hank was only able to

make that work for one year and had to give it up in subsequent years. However, it was

still an important experience for him which he reflected upon fondly.

When Jacques first matriculated to the University, he was not persuaded by the

campus attempts to invoke school spirit around their mascot or sporting teams. After he

joined the marching band, he understood the sense of community that is fostered by such

identification and appreciated the connectedness it provided for students:

> Particularly at convocation, any time they were like, "You're a [Muskie] now," it
> was like, *[displaying lack of enthusiasm]* "Eeh. [Muskie]." But then marching
> [band] really made that come alive for me, where I started to understand more
> about being connected to something that was a lot larger than me and
> understanding that I was part of this pretty cool community.

Similarly, Lee-Lee did not have a particularly strong identification with campus or the

mascot, but had a conversion when a friend got her involved with watching the women's

hockey team compete for a national championship:

> The women's hockey game changed me a lot in terms of feeling like I'm a
> [Muskie] and plus in terms of interact[ing] with people that [are] not in [a] science
> major. You feel like, "Omigod, I'm part of this university." Or like, "I 100%
> support the [Muskie] team."

Although some students felt a connection to campus and to the Muskie mascot,

and they resonated with that identity, it was not connected to sporting activities. Devi felt

that connection with his group of friends:

> It does resonate for me. I do feel like I belong to the University as a whole, but I
> respect my own distinct sect of people. We are unique [Muskies]. We don't go to
> sporting events, but that doesn't mean we are not [Muskies].

Other students felt connected to the institution, but it did not relate to sports or in

any way connect to the mascot or that sense of identification. This resonance was simply

a connection to the school and feeling proud of their academic institution. Sheldon

indicated that he had pride in his school but it was not connected to sports or the mascot:

> In my mind I associate the [Muskie] name a lot with the sports, and I just don't care about the sporting stuff at all. So I guess I identify myself more as like a [Midwestern] University student, but I wouldn't ever think of myself as a [Muskie] really.

Jenny sensed a connection to the broader university community through her participation

in various campus activities including research and student groups:

> I feel like I'm part of this community. After four years, it's kind of hard to not feel that way being a full-time student every year and being involved in different things like research and the pre-dental group and all that.

About one-fourth of the students did not particularly identify with the mascot or

have a very strong resonance with campus. Although they were not dissatisfied with their

institution, they chose to identify more with their major or friends or other parts of the

community rather than an overall campus identification. Gloria asserted that she simply

did not have time to participate in those activities that may have forged a stronger sense

of school spirit and campus identity:

> I mean, I wear [University] clothes. Otherwise, I don't really feel like a [Muskie]. I don't really attend sports, games, or anything like that. Usually I either don't have time or I'm working, so I really don't go to any of those things.

Overall, these students did appreciate feeling connected to the campus and the

institution. This campus identification existed in many different forms for these students,

and it was not exclusively connected to sports and the mascot.

Involvement Opportunities

The third of the four campus factor areas in the Persistence Pyramid is involvement opportunities. The University of Midwest provided a large number of involvement activities and engagement opportunities for all students on campus. This group of low-income students effectively capitalized on these opportunities and became involved in large array of activities, including volunteer work, student organizations, research, and study abroad, which ultimately increased their connection to campus and enhanced their educational experience. Under the umbrella area of involvement opportunities, six themes emerged as particularly relevant to the students' perception of their persistence: (a) mentoring and tutoring, (b) volunteering and community service, (c) student groups, (d) campus events, (e) research, and (f) study abroad.

Involvement opportunities: mentoring and tutoring.

One of the most unexpected results that I discovered from this group of low-income students was that that at least three-fourths of the students had at least one substantial experience serving as a mentor or a tutor. It is possible that the other students also served in such a role, but they made no mention of such experiences in our conversation about their activities or noteworthy experiences. Mentoring and tutoring appeared to have the greatest impact on increasing persistence of all the engagement activities. Several of the students had multiple experiences and all of them talked about how important and meaningful this experience was to their overall educational experience and how it helped them persist. These opportunities appeared to give the students a greater appreciation for their own educational opportunities and an enhanced

sense of agency by being placed in a role where they were the ones in a position of authority and expertise. Often these experiences involved serving other college students, but several of them included working with high school students or younger children and preparing them to attend college. In addition, the students felt a sense of responsibility to be a successful student and achieve degree attainment because they had younger college or highs school students who were looking up to them as role models.

Gloria claimed that her role as a peer mentor her sophomore year for first-year students in the Post-Secondary Excellence program was one of the primary factors motivating her to persist until graduation:

> A job that I really thought was rewarding and beneficial, I was a mentor for [Post-Secondary Excellence]. It was my sophomore year, and you get to know 19 different people, and they're struggling just like you did your freshman year, and somehow you have to keep them motivated and listen to them about their problems and try to give them resources and advice. I really like that because you can help people. You can motivate people to stay here. They're like, "Oh. I'm going to drop out. I'm going to transfer." I'm like, "No. You have to see all the opportunities here. You have to see what there is to offer you." So I thought that one was really beneficial.

Several of the students were tutors or mentors in the Upward Bound program. Leah's involvement with Upward Bound gave her the tools to encourage her younger siblings to become college-bound and motivated her to persist to graduation:

> It did help me grow. I realized how to help my siblings get into college because there were lots of the same comments that the students made about why they couldn't, why they wouldn't be able to get into college, or what they were scared of. It also helped me adjust my concerns about college and maybe convinced me to stay in because even though it's hard, it's easier to face it than it is to like face the consequences of running away from it and then having to find a job and stuff like that.

Saulo also worked as a tutor in the Upward Bound program. He had a very positive

experience tutoring high school students and serving as a role model to show that

underrepresented students, specifically Hispanic students, can succeed in college and in

STEM fields:

> I worked in the Upward Bound program my first two years as a tutor there. I did
> the math and science classes…. I was working with high school students. And
> these were students who were basically considering college, but they didn't know
> 100% yet, and the program was to get all of these students to apply and get into
> college. I guess it means something to see someone from your same background.
> If I see a Hispanic professor, then it's like, "Oh. Yeah. I could do that too." So
> kind of the same thing where I'm working with these Hispanic high school
> students who don't think they can succeed in college, but I'm [the] one telling
> them that, "Yeah, you can. I am here, so you can do it as well." That was really an
> eye opening experience just because it really got me more connected to the
> University and its whole point of diversity, equity, all that throughout campus.

> Serving as a role model in that way created a perspective shift for Saulo and

motivated him to pursue an advanced degree where he can continue to serve in that

positive modeling role and help underrepresented students succeed in STEM. Saulo

worked for Upward Bound for his first two years and then began working with new

college students:

> Now I'm working with mostly incoming freshmen to the [Engineering College]
> and doing similar work. How can you succeed starting out, early on, because I've
> been telling you right now, I had some difficulties starting out. I saw this as my
> way to help those people not experience those same things I did because I didn't
> really enjoy them that much either. It definitely was a growing experience, being
> able to give back because the mentoring relationships I've had, I've gotten so
> much out of them. In the end, it really played out into helping me figure out what
> I want to do once I graduate.

> Serena also served in various mentoring roles that helped multicultural students.

One worked with younger college students through a multicultural office on campus: "I

did the multicultural kickoff; that's when all the freshmen come in. And then we tour

them around campus and just kind of be a point of contact for them through like

freshman, sophomore, junior year." Serena was also involved with several mentoring

programs that got her connected with students in high school. Her role was to encourage

them and help them prepare to enroll in college. She was also involved in a community-

engagement program that did similar work:

> Most of mine really surrounded around the multicultural community and helping other Black students come in to the U period. But then also showing that [the Business College] was an opportunity as well, especially, because admission is heavily based on ACT scores and studies show that, predominantly, minority students exhibit lower ACT scores.

Carrie was also involved in a community engagement program. The opportunity to tutor

students and teach ESL solidified her decision to pursue her teaching license. Like Saulo,

this experience motivated her to graduate so she could achieve her longer-range goals:

> I've tutored in so many different places in [the institution's city], mostly Latino communities though, and then also teaching English as a Second Language in Ecuador reassured that path. I knew I've always liked teaching. That's why I started out in [the College of Education], but it all kind of just fell into place with my passion.

> Yvette was also interested in helping underrepresented students. She had an

opportunity to serve in a very informal mentoring role via her job in admissions. She

would contact prospective underrepresented students and try to help them understand

their options and the process of matriculating to the University:

> I always call these people because their parents probably aren't helping them with school and things like that. So it was just nice to be a part of that process, talking to students and reaching out to other multicultural students and telling them about all the different things that our campus offers and things like that.

Several of the students had meaningful roles mentoring current college students on campus. Suresh was involved with the economics club where he served as a mentor to other economics majors:

> As a junior and senior I was able to help a lot of them. They wanted to ask questions about classes or stuff like that. That was nice to have that knowledge from a senior and junior who could like tell you about classes as compared with if you didn't know anything.

Patrice noted that one her most beneficial experiences was serving as a Welcome Week leader charged with introducing new students to the campus prior to the start of their first classes:

> I actually was a Welcome Week leader when I was a sophomore. That was wonderful, that was probably my favorite thing that I've ever done for the U. It was a lot of work, but it was so much fun. It was the best two weeks I've had in my life. It was really fun because I got to learn things about this school that I never knew before, so I really liked that part of it more than anything.

Jenny explained that she derived great benefit from serving as a tutor, both in terms of providing meaning to her work but also in terms of understanding the course material. She listed the tutoring position as one of her highlights in college and believes she learned more from her role as tutor than her role as a student: "I also was a tutor for the biology department, so I was involved in that. It was good. It was a learning experience. I feel like I learned more being a tutor than being a student."

These low-income students provided strong evidence that serving as mentor or tutor was dramatically helpful in encouraging their persistence. They indicated that they were motivated by being in a role in which they were the expert and were able to help others. Many of these students also found time to help other through other forms of volunteering and community service.

Involvement opportunities: volunteering and community service.

In addition to these mentoring and tutoring experiences, almost all of the students were also engaged in volunteer work or some other type of service to the community at some point during their four years. This service work was demonstratively meaningful to the low-income students, and several students conveyed the significance of this work in their lives. Many of the students had service jobs or volunteering experiences that were particularly essential to their success. The students indicated that these experiences gave meaning to their education or prepared them for careers or helped them understand what they might want to do after college. Carrie's summer job paid her a stipend and gave her a scholarship, but more than financial help, it was doing work that she found particularly meaningful and provided her with skills that she could apply in the future:

> But then last summer I stayed up here for the first time, and I did an AmeriCorps Vista position, where you went into the schools, and you did summer reading programs during the school day. And then you implemented a curriculum in the after-school program, and I got to do that in [a local] Elementary School [in] which[the] majority have need of Spanish speakers, which was up my alley.

Yvette traveled to the Dominican Republic to help Haitian refugees. This experience allowed her to view her own challenges more positively. She compared her rather substantial hurdles to the even greater struggles faced by the refugees in order to gain a better perspective and confront those obstacles that may impede her success:

> I realized how much I had to be thankful for just because the people we were helping literally had nothing. We went to visit some patients that worked in the garbage dump, and they would collect bottles and hope they were glass instead of aluminum. They would only get like one peso, one to two pesos for it. But we gave them literally a cracker, a cup of water, and a piece of salami, and they thanked God for all that he had done.

Hank, Carrie, and Gloria engaged in at least one service learning course which included volunteer service as part of the course. The students continued their volunteering experience after the course ended or embarked on related volunteer work after the course. Serenea, Hank, Tariq, Earl, and Jenny all noted that their service work was connected to their participation in Greek life and they found this work to be rewarding and helpful for their overall success. Almost half of this group of students did volunteer work as part of a student organization. They worked on hunger campaigns, Habitat for Humanity, pay-it-forward initiatives, Big Brothers/Big Sisters, and other forms of community service. Several students volunteered at the Ronald McDonald house. Jenny volunteered there for her entire four years and asserted that she gained a better perspective on life from the experience:

> It puts things in a different perspective to see a five year old fighting for their life, yet they have this optimistic attitude; when I'm angry that I have a chemistry test the next day. Stuff like that just puts it into perspective. So that was a good learning experience.

Hank volunteered as a soccer coach and at a camp for high school students exploring health careers. Jacques worked on the creation of a community garden. Suresh volunteered to play with kids at the local hospital. Gloria volunteered at a mental health clinic and at a performing arts center for people with disabilities: "You realize how much you have, and I feel like I became more appreciative of what I have and what I can do."

Involvement opportunities: student groups.

In addition to all of their service work, the low-income students also were heavily involved in student groups and organizations. Almost all the students in the group participated in at least one student club, organization, or Greek life. Most of the students

participated in several groups and organization and some of the students took on

leadership positions. Most of the students discussed how that participation in student

groups was vital for making friends and feeling connected and part of campus. Suresh

noted how he made a lot of his friends from being involved with two different groups,

one related to a hobby and one related to his major.

> I think that was a good way to interact with others, and I got to know a lot of
> people. And then I'm also the President of the [Midwest Sport] Club on campus
> and met a lot of people, a lot of people from the subcontinent, and I got to know a
> lot of them. The economics group, I know mostly everyone in it, and I can just
> hang out with everyone, go on the weekends, go out, hang out and stuff like that.

Reese illustrated that joining a sorority was instrumental to her persisting to

graduation and being successful: **"**I joined a sorority my freshman year, and I definitely

think that had a big impact on getting involved in the U and finding my place within the

U. So I think that definitely contributed to my success." Reese discussed how the sorority

gave her a sense of community and got her involved with events on campus and the

community, which made her feel connected to the University.

> I think the biggest thing to stay connected with the U because a lot of my friends
> freshman year just ended up transferring just because it was too big for them.
> They didn't join any extra activities or any extra clubs which, I think it would be
> hard not joining something here.

Reese explained that her sorority sisters also were helpful with her courses and with

picking a major: "And with my courses too, it helped just because there were girls within

my same major, and then I ended up switching majors, and they just helped me figure out

what I wanted to stick with."

Earl also highlighted his participation in Greek life as a key to his academic

success. He appreciated the group of friends and the support network that his fraternity

provided, along with requirements for philanthropy and student group participation which

kept him connected to campus and the community. Earl explained how his fraternity

brothers were helpful with his academic work and choices:

> Using the other members of the fraternity has been always helpful. Asking someone to review a paper, asking someone to look over my test results and see what I can do to improve it, or something like that has always been helpful for me. There's so many majors out there in my fraternity, that someone had to have taken a class before with that, so having that to fall back on, "Should I take this professor, or should I take this class at this time?" So having that fall back on knowledge has also been very helpful.

Several other students had leadership roles in student organizations and were

involved with resurrecting inactive organizations. Many students mentioned how their

participation in student groups created a sense of community for them on campus.

Jacques was involved in reviving a defunct student group in his major, expressly for the

purpose of creating a sense of community:

> I helped restart FUSE which is the Fellowship of Undergraduate Students in English. It was our goal to create the sense of community within the English undergraduates because we didn't have a group like that. The few of us who helped kick-start that again, we want that sense of community here.

Saulo considered group membership as a way to make a name for himself and make

connections:

> I was in the Society of Hispanic Professional Engineers. It's a national organization, but actually the chapter around here was inactive, just because it died out. I was approached by the staff in the [Diversity Office] saying, "Would you be interested in helping start out a chapter?" So I agreed, and I thought, "Oh. Here's my ticket in to getting somewhere. I'm in a group." That group was really helpful in that I could meet other students who have the same kind of cultural heritage kind of things, but also at the same time we were interested in the science and engineering. These are people I'm in classes with as well, so that helped me to make some more connections in the college.

Serena encouraged future students to participate in student groups early in their college career: "If you go to a student group and don't really care for it, there could be someone there that you connect with that could open up another opportunity. Developing that support group early I think is important." Fiona articulated the benefits of being involved and the sense of purpose that can come from taking on responsibility, either in a leadership role or as part of a service organization:

> Being involved and being a part of the U, giving yourself responsibility and worth within the system instead of just partying all the time. I understand the allure to that, but there's so much more you can do, so much here. I don't know if people really realize that. You can get involved and really work towards something.

Reese recommended that students choose one group where they get deeply involved rather than being superficially involved in many groups:

> I just think trying to get students involved with one specific group and stick with that group would help a lot because getting involved within a lot of groups is great, but finding that one spot you can stick with and count on those people, definitely impacts your experience a lot.

> Adrian also stressed the importance of joining some type of club or organization

to balance the demands of school, which can consume all of a student's time. He implied that students will be more successful if they participate in some type of student group:

> Don't make it all about school even though school is very important. You do need a life outside of school. Join an intramural team. Join a dance team. Join something. Just don't make every day school, work, sleep, repeat because if you do it that way, you may pass, you may succeed. I just think it will become ten times harder.

Gloria echoed Adrian's sentiment that students need some stress relief in their life to create balance and be successful:

> I think that when you're here, when you study, you can't be here just to study. You have to understand that you need to venture out and get to know people and

to have variety in your life rather than just sitting here and studying. I think that intramurals, and I took a volleyball class one time, I think that helped. I mean just having some kind of stress reliever, whether it is a sport or whether it is a student organization, or whether you are just doing yoga at the rec every day. Definitely try and focus on making sure you have "you" time. Make sure you have stress relieving time. I feel like those have been beneficial.

The students indicated that participation in student groups was helpful for numerous reasons. Some of them gained leadership experience and other useful skills. Some of them appreciated the social aspect and the ability to relieve stress by taking a break. These students also participated in many campus events in order to get connected to campus and take a break from studying.

Involvement opportunities: campus events.

These low-income students participated in many campus activities, including sporting events, theatre and arts performances, concerts, and a large variety of speakers and other campus presentations. Jenny was able to identify the different ways that different events connect students to campus and make them feel part of the broader campus community:

> I think definitely the sporting events made me feel more connected to the school. There's that intense school spirit when you're at something like that. And then with going to the arts events, I went to gallery, one of the student artists, and then a ballet, and I think that connects you to the campus in a different way because that's a population I don't generally interact with. I was never involved with it before, so it gave you a different appreciation and different connection with the campus because it's something I wasn't aware of until I experienced it.

Serena also noted that sporting events were a good opportunity to connect with other students and create a sense of community with other campus members:

> I think the idea of camaraderie, especially at sporting events, because the passion is there. So I think it's really fun. It's like a stress reliever, too. Just to interact

with friends that I haven't seen in a while, and big groups, and if it's a good game, it's really fun.

Several students revealed that they attended various campus speakers, both for the information presented and for the opportunity to network and make additional connections. Yvette and Carrie used the presentations as a form of career exploration as well. Yvette explained why she found these events so beneficial:

> I've gone to a lot of public health forums, a lot of forums on health disparities and things like that. Those are the activities that I really found more interesting because I can go there free, and I'm going to see someone talk, and maybe I can connect with that person and find out what they are doing.

Carrie also thought campus speakers were both educational and an opportunity to network:

> In certain events, like the speakers, I was able to network. That was important. Also they're bringing to me different viewpoints or different resources I was not aware of. I went to an entrepreneur panel, and I didn't even know what an entrepreneur really was. How did they get there? So that was super awesome to see in the community how they ended up where they are and created their businesses.
>
> Many of the students stressed the importance of taking advantage of all the events

on campus and strongly urged future students to not let those opportunities go to waste.

Patrice indicated that involvement activities were one of her top recommendations for future students:

> I think living in the dorms and connecting with as many people as possible, joining groups, being active in homecoming or [seasonal concert events]. I think it's all very important: going to sporting events, going to free things at [the student union]. So, definitely, involvement and connection is key.

Suresh argued that the students who maximized those opportunities are more likely to be academically successful.

I don't think a lot of people take advantage of that, and I think the people who actually do, do succeed a little more because then at least they are more a part of the campus and the community as compared to other people who [are] thinking about just drinking every weekend.

Saulo explained the importance of taking advantage of the events and other opportunities occurring on campus in order to take full advantage of the college experience.

It's a huge university, and there's endless opportunities. Don't box yourself in to just focusing on your classes and end up missing everything else that is going on around you. You will get burned out if you just stick with your classes this whole time. Sure it's great to get good grades and all that. At the same time you need to get those other experiences to really round yourself out, to get some perspective on things, and really grow over these four years.

Yasir viewed these events as a good opportunity to meet other students and other groups on campus and encouraged future students to do the same: "go to different events and expose yourself to different communities around campus -- that helped me expose myself to [get] involve[d] in different groups."

Over half of the students expressed a desire to attend more campus events and be more involved but they did not have the time or the money to do everything they would have wanted. Since many of them were already working many hours and were taking out loans to cover expenses, the ability to find more time or money for involvement or events was particularly challenging for this group. Gloria indicated that she was compelled to work a lot of hours to cover her expenses, but her work schedule prevented her from being as involved with the University as she would have liked:

I do work a lot and I feel like that takes away from time that I could be getting involved with the U. Like I didn't do intramural volleyball this semester because I was like, "I'm going to have to put my work schedule around this and I can't do that." But working definitely was really hard to go to some study groups or go to a student organization meeting or some of the meetings over here on campus or

some of the speakers, the registered dietician speakers or even just student activities. I mean it definitely affected that.

Involvement opportunities: research.

Another involvement activity that appeared to be particularly impactful for students was their involvement in research. Students at universities with very high research activities are frequently encouraged to become involved with research activities; however, most students do not take advantage of such opportunities. Thus, the finding that just under half of these low-income students were involved in one or more research projects during their undergraduate career was unexpected. Involvement in research activities appears to procure several benefits for the students, as the following quotations suggest. Research got them connected to campus, friends, and faculty. The experience of participating in research also was helpful to the students in determining their long-term goals and career aspirations.

Several of the low-income students were emphatic about the positive influence that their research involvement had on their persistence, academic experience, connections, and long-term goals. Upon reflection, Reese determined that her involvement in research was one of her top highlights and a contributing factor to her academic success:

> The more I think about it, the more I think my research lab has definitely had one of the most positive impacts on me throughout my time here. I've only been involved in it for a little over a year, but I've learned a lot more working with them and received a lot of support than I can say with a lot of the other things.

Reese said that working in the lab provided her with a support network as well as giving her a sense of purpose:

> Definitely working in the research lab is a positive experience where I feel supported and I make a difference in the lab directly, so that is nice. I feel they are interested in what I am doing in school and what I am doing after school.

Yvette also noted this connection with faculty while she was doing research and indicated that the faculty served as a surrogate for familial support that she did not have:

> I was able to do research through programs like MSROP (Multicultural Summer Research Opportunities Program). So I think that the faculty were very helpful because I don't have a large family or a strong familial support system. It was the faculty that helped me a lot.

A few of the students mentioned how the research gave them a better understanding of what they were learning in their classes because it allowed them to apply knowledge that otherwise seemed simply theoretical or esoteric. Saulo appreciated that the applicability of the research he was doing connected his classroom learning to the real world:

> After I met with him and talked about what he does, types of projects I could be working on, I was really excited because even though it's an additional thing besides my classes, it's something where you're actually putting to use what you're learning,

Several students indicated that their work with the faculty researcher opened other doors and opportunities for them by getting them connected to other people in the field or a related field. Lee-Lee explained that the primary investigator (PI) she was working with helped her make numerous connections in a variety of areas:

> First thing is working in laboratory [will] make my resume good. And second, because my PI is a doctor, he knows a lot of stuff about the medical field or research field. So he gave me a lot of opportunities to interact with other research projects, even in other laboratory groups, other groups in the same building. He also always have good recommendations for looking for jobs or classes in order for success.

The research was also helpful for the students because they often got paid for the work and it often led to additional paid employment and provided them with skills that would be helpful in their post-college careers. Sheldon noted that his research grant turned into full-time paid employment for the summer:

> [The research grant] started with [a] Professor in the space physics stuff, and it's who I'm actually doing my thesis with right now. I started with [the research grant], and then he took me on as a student worker, so I've done work on and off for him. Last summer I worked all summer like 40 hours a week, so that was really helpful.

Almost all the students who participated in research discussed how the experience helped them clarify their future goals, even if that was a realization that certain types of research careers were not a good fit for them. One of Resse's strongest recommendations for undergraduate students was to take advantage of being at a research university and become involved with faculty research or a related activity: "Getting involved in research or an internship or something that links you to a faculty [member] that can help you and figure out what you're doing, was definitely helpful." Reese attributes her research lab experience with also helping her figure out what she wanted to do after graduation:

> It also made me realize that I might not necessarily want to go in the research field, so that's what made me choose the doctorate of psychology over the doctor of philosophy, the Ph.D. So I think it definitely helped clarify what I wanted, and definitely having my professors as an outlet to talk about grad school and the different things he knew, it helped a lot I think.

Jenny's research experience also provided her with a clarifying experience about her career goals. Working in a research lab helped her decide which types of careers suited her best: "Working in a lab setting definitely showed me I didn't want to do that. I'm a people person, and I didn't like sitting under florescent lights by myself for hours."

Involvement opportunities: study abroad.

One last engagement activity that had a dramatic positive effect for many of the low-income students in this study was the opportunity to study abroad. Half of the students were able to take advantage of that option. Considering that about 14 percent of U.S. bachelor's students study abroad, and this University has about 20 percent of its students studying abroad, such a high percentage is unexpected for a group of low-income students (Institute of International Education, 2013). Some students in the sample expressed a strong desire to study abroad, even going as far as starting the application for a particular program, but could not afford the financial implications. Lee-Lee and Devi, in particular, expressed extreme disappointment in not being able to afford to go abroad. Lee-Lee explained:

> The most exciting part of college is going to study abroad, but because the financial aid program, I didn't. I never do it in these four years. I'd love to study abroad, but I [was] not able to do that because it's at least, no matter where you go, at least 2,000 or 3,000 [dollars].

Those students who were able to study abroad experienced a wide range of positive outcomes that can be beneficial for persistence. For some, the benefits included improved learning and understanding of particular subject matter, which they believed helped them be academically successful. For others, it was improved confidence and social skills that helped them make vital connections, which may lead to increased persistence. In some cases, it was simply a greater appreciation for their life and the opportunities they had in the United States that allowed them to value their education even more and pushed them toward degree completion. Gloria recognized how much her

study abroad to Venezuela increased her language skills and confidence in speaking

Spanish:

> When you're put in a culture where you don't know the language, you have to learn the language. I think that is the best way to learn the language, of course. There's still a lot of Spanish I don't know, but just pushing yourself out of your comfort zone is really important.

When she returned from abroad, Gloria utilized her increased proficiency in Spanish to improve her relationships with her co-workers: "I've always been a server in the restaurant industry, and the back of the house is generally Spanish-speaking. Now I can actually hold a conversation with them with confidence, and you can tell that they really appreciate that."

Several students indicated that they gained confidence and the ability to tolerate ambiguity and solve problems in novel situations. Both Sheldon and Gloria gained skills and confidence by being forced to figure out how to navigate a foreign country and make new friends. Fiona said the increase in social skills was a particular highlight from her study abroad experience:

> When you are studying abroad, I didn't have anyone. I usually have a few really close friends, but this time I just hopped from group to group and just did my own thing. It was different from here, and I think that was good.

Carrie identified studying abroad and community involvement as her two favorite college experiences. She cherished her time abroad due to the close bonds she formed with the other students that went on that trip: "The people I went to Ecuador with, they're still a major friend group for me. We constantly get together as an Ecuador group. We actually say, 'Let's get our Ecuador group together.'" Sheldon appreciated his study abroad

experience because he gained a more global perspective and a desire to see other parts of

the world:

> Before that I always figured, "You know, I don't see a huge point in traveling to
> other countries because America is giant anyway. There are so many things to see
> in America." The south is almost a different country from the north, and I just
> figured there's enough places in America I've never been. I might as well travel
> these first. Now, I'm like, "We'll just kind of skip portions of America. I want to
> see Germany. I want to see Australia." Now, I want to do more of these bigger
> global things, so that's probably changed a bit because of that experience.

Yvette's study abroad experience helped change her perspective and view herself

more positively. Rather than simply view her life as one of momentous struggle, she put

those challenges into the context of how fortunate she is to have had the opportunities

that she has had and to be extremely proud of all that she has accomplished:

> Seeing someone who looks like them that's from the United States and actually
> doing so many different things education-wise. It was hard for them to believe,
> and they would talk to me about all of the people who had come through who
> were doing research and things like that. They said they were all White. There had
> never been [any]one who came from their community who was like them. So that
> was a really good experience for me and I really enjoyed it a lot.

 Similarly, Reese had a really wonderful study abroad experience in Denmark: "I loved

every second of it." The experience made her even more excited to return and motivated

to continue with her studies at the University:

> I was originally just planning on going for fall, and that's what I ended up doing,
> but I had thought about staying the full year. I'm kind of glad I didn't, but it made
> me appreciate what I had here a lot more. So coming back I was more excited for
> everything.

After Yvette returned from her study abroad experience she continued to use those

pleasant memories of her time there to motivate her to persist through any challenges:

> Even though I'm going through a hard situation now with my family and stuff,
> there is something that you can always be thankful for, and so that was a really

important trip to me. Meeting those people was really helpful for me. It was a refresher since college was being so hard and going through so much at home. Going there, it gave me a boost in my morale again, so I could go on. It kept me very happy just thinking about that place and the people there. That was like happiness that lasted so long.

Although several of the students expressed their desire to have participated in even more involvement opportunities, it is clear that this group of low-income students was highly engaged. Due to their time constraints, many of them were not able to spend as much time as they would have liked on involvement activities, yet most of them still found time to volunteer, study abroad, conduct research, and participate in student groups and campus events. They indicated that serving as a mentor or tutor was a particularly rewarding experience that increased their ability to persist.

Caring Culture

The last of the four campus factor areas in the Persistence Pyramid is caring culture. This group of low-income students experienced a wide range of positive and negative interactions with staff, faculty, service offices, and institutional policies and practices. As a result, their experiences on campus with respect to a caring culture were organized into two thematic areas: situations in which the student perceived (a) a supportive environment and (b) an unsupportive environment. Many of the low-income students in this study had both supportive and unsupportive experiences.

Caring culture: supportive environment.

Several students shared examples illustrating how a supportive environment, that includes a compassionate campus culture of caring, can be a real asset for students and encouraging them to persist. As Fiona was reflecting on her four years, she recognized

the impact that such an environment had on her academic success. When asked, she

articulated it as the primary factor in her ability to persist to the point of graduation:

> I think the supportive environment of the whole campus, it's very inclusive. I think the U has supported me and made this a good experience, because I could have had such a different experience anywhere else, but I may not have been as successful somewhere else.

Some of the students sensed this caring culture immediately from their first days

on campus. Reese noted that her first week on campus made a lasting positive impression

that shaped her time on campus and her opinion of the sense of community: "I think the

campus is definitely welcoming and supportive. Welcome Week was absolutely

wonderful. I loved it. For everyone involved, I think it just made campus feel a little more

manageable right away in the beginning, which was nice." Saulo asserted that he

experienced this supportive environment from the beginning and throughout his college

tenure. He developed good relationships even with upper administrators. From his

participation through Summer Bridge, he met the Associate Dean of his college and

continued to connect with him through his work in various labs and student groups. This

positive supportive relationship culminated with an interaction during Saulo's

commencement:

> The Associate Dean, I met him through the Summer Bridge. He is one of the coordinators of it, actually, and coming up to the stage he was there. Because I've been in and out, all over, he knows me, and he's like, "Finally, you did it," and a big hug. My friends are like, "How do you know him?" I'm like, "Well, yeah."

Other students identified particular incidents that lingered with them as specific

examples of faculty or staff demonstrating a caring environment. Some of the students

had positive experiences where staff members went out of their way to help the students

in a challenging situation. Tariq needed his grades from his study abroad experience to be posted to his transcript so he could apply for internships. Several staff members were able to greatly expedite the process for him:

> One thing that sort of sticks out for me was when I was looking for internships after my junior year. My grades from London weren't in yet, and schools wanted or places [of employment] wanted to see them. I wanted to get them rushed, and it was going to take three more weeks. I called and the people I spoke to were really helpful, and I got it the next day.

Makeda experienced a deep sense of compassion from faculty members who were willing to help low-income students like her by providing textbooks for their classes:

> I think that's helpful because I know I have a friend who can't afford books because her parents don't live here, and I know she told me about a professor, but not the same professor [who gave Makeda books], also provided free books for her. I think that's really good when professors care enough to give you books when they know a lot of students can't afford it.

Over half the students indicated that some of their strongest perceptions of a caring and supportive environment came from their interactions with faculty members or other instructors. Yvette appreciated that her service learning instructor employed extraordinary efforts to ensure that the students were being supported in the course and their service requirements: "A Spanish service-learning class that I was taking, the teacher was really nice. Every day of class, she offered to meet in the coffee shop and talk about our experience, or our organization, or things like that." Jenny was similarly impressed with one of her professors who took the time to individually connect with each member of a very large lecture course and support their academic success. Unfortunately, this positive experience was a bit of an anomaly for Jenny:

> I have a professor right now, my ecology professor, there's 150 students in the class, and he knew every single student's name the day we walked into class. I

don't expect that from all of the professors, but he genuinely cares about each student. When someone doesn't do well on a test, he has a meeting with them, not to make them feel bad, but he wants them to learn. It's refreshing to have a professor like that because it's the first time in my four years that I think that a professor actually cares about how each student is doing in class.

Caring culture: unsupportive environment.

Unfortunately, not all students had a universally positive experience. Although most students had at least some positive interactions and considered the environment generally positive, they also had numerous instances of negative encounters with faculty, staff, or institutional bureaucracy that representing a cold or uncaring culture. As noted above, numerous very positive encounters occurred with faculty members or other instructional staff. By way of contrast, over half the students also had experiences with faculty, instructors, or staff members that were indicative of an unsupportive or uncaring environment. Even those students who had positive experiences with instructors also had negative or ambivalent interactions with faculty and instructors. Although some of these experiences were outright hostile, many of the negative interactions were simply a sense of indifference on behalf of the faculty member toward the student's situation. Several of the students were aware that this sense of indifference was perhaps not overtly intentional but simply a factor of being at a large institution with large classes. Makeda indicated feeling this indifference: "Usually professors here at the U don't reach out and say, "Do you need help? Is everything going okay?" Because they have so many students."

When faculty have large classes and large number of competing responsibilities, it can be challenging to provide the level of individual support that students expect. Jenny noted that it was difficult to get to know any of her instructors:

I feel like I never got the chance to really know many of my professors. I also feel like the teachers here are so busy in general that they don't have time to just sit down and chat for a little bit.

She indicated that large class sizes played a role in that challenge and added to students' persistence problems overall:

I think the big classes are pretty intimidating. I don't know how much they can do to change that. But I think some people, when they're in a big class, that they feel like nothing but a number. They say that can kind of push you away.

Faculty and students may have substantially different expectations for each other. Gloria had such a disconnection with one of her instructors who had differing expectations which Gloria perceived as very unwelcoming:

I had another teacher where if I asked, if anybody asked, not just me, if anybody asked a question, she'd be like, "Shouldn't you know." She would look at you like you're supposed to know it already and just seem really annoyed.

Gloria illustrated how those interactions between students and faculty can impede the learning process:

I feel like that discourages me the most. If you're going to look at me like I'm stupid when I ask a question, I'm not going to ask questions, and I'm not going to learn. I feel like I've run into so many professors that are just here for research and just teach on the side because they have to. It's kind of like my mentor, he was just there for the money.

Adrian had a particularly disconcerting experience with a professor who eventually was terminated for incompetence:

Classes after class, he would go up to the board, try to write down a calculus proof, spend 50 minutes, and class only lasted 50 minutes. At the end would look up and say, "Oh. That's completely wrong. But you guys get the idea right? So if you guys want to fix it for me." It's like how are we going to fix it if we're just learning the material and you messed up on the board? Then it was just very chaotic. I remember on the very first test, there was two classes for [this] calculus, and [they take a common test]. On the first test, [the other] class averaged an 84% on the test. [For Adrian's] class the average was 40%.

Several of the students had experiences where they perceived their instructor or

adviser to be discouraging them and not believing in their ability to be successful in

particular courses or in a particular degree program. Serena was upset that when she

wanted to major in accounting her adviser tried to discourage her from pursuing that

route:

> Even when talking to my adviser, she was like, "Oh. I don't think you're cut out
> for accounting. I think you should stick with the marketing and the
> entrepreneurial management." I didn't appreciate how when they see that you're
> persistent about something to say, "I don't think you'll be good at that." And it's
> like, "You don't really know me that well." I think it lacked a little bit of the
> encouragement factor.

Patrice also perceived the messages from her adviser as extremely discouraging:

> My adviser when I was in elementary education would tell me every time I met
> with her that I wasn't smart enough to be a teacher. So that was really, really off
> putting. It was really awful. I felt really bad after every time I would go to a
> meeting with her. She wouldn't say it as bluntly as that, but it's like, "You need
> to have this GPA to even think about applying, and if you don't have this GPA,
> then you can't do it." She was not a nice lady.

Hank thought some instructors put too much emphasis on the negative outcomes

from doing poorly in just on class or on just one test. He perceived the instructors as

sending messages of total failure and encouraging students to abandon their pursuit of the

degree:

> Professors who said that, "You have to do well, and if you're not going to do
> well, you're not going to succeed in life." Those [messages] are really bad
> encouragement because students will change their mind because then they would
> believe: "Just because I won't pass this class, that means I'm not going to do well
> in my next class or in this University at all." And the chance of them jumping out
> of college or the class will be very high because their professors are not
> encouraging them into thinking something that's outside the class, but that it's so
> important that you have to do well in this class, and it will scare them away.

Sheldon included a complaint that frequently is heard around the campuses of

research universities. He criticized some departments for not ensuring that all the

teaching assistants in the classes were fluent in conversational English, which made it

challenging to get clarification on class material that he was not understanding:

> In the sciences and engineering, making sure all the TAs do speak fluent English. I know going through the grad school application process, if you're a foreigner, you have to have a certain proficiency in English, but sometimes I feel those still don't work 100% the way they should because it's still sometimes a disconnect. You ask a question, and they don't understand your question. They give you an answer that wasn't to the question you even asked in the first place.

Several students complained that the University did not seem as committed to

undergraduate education as it was to research, graduate education, and other initiatives.

Jacques expressed this feeling of not being a top priority to the institution and that the

campus did not care as much about his education:

> I've heard a lot of people complain about the focus on the grad students is a lot heavier than that on the undergrads. That's really frustrating when you come to a university, and you're like, "I'm going to get this awesome four-year education," and then you feel like they don't care about you. It's a giant school; there are a lot of people here. I don't want them to hold my hand through it, I just want them to care as much about my education as I do.

Some students did have negative encounters with staff members at certain campus

offices. Makeda had an unpleasant interaction with the campus health service when there

was an error with her insurance billing: "This woman that works there was really cold.

They charged me the $900, and there are just rules, and the way she spoke to me was

really rude, so that wasn't a good experience."

Students frequently complain about bureaucratic red tape on college and

university campuses. This issue may be particularly prevalent at large institutions and add

to the sense of an uncaring environment. Sheldon criticized the many steps involved in

filing forms for any numerous and common processes when such procedures could be

automated electronically:

> It's really annoying when you have to fill out a form that you have to physically
> print out, and then take to a different office. It's like, "why is this not on a
> computer?" You click a check box; they click a check box, and it's done.
> [Instead,] it's sign a form, take it somewhere else, they sign a form, you take it
> somewhere else. Bureaucracy is just annoying; it's a headache that most people
> don't want to deal with when they are trying to deal with classes.

Jacques had a very challenging time dealing with the University bureaucracy and

various rules and regulations when he was trying to combine both a May-term study

abroad and a summer study abroad experience that were both in the same location in

France. Since he was not returning with the group at the end of the May term, he had to

pay a very steep change of ticket fee:

> The Study Abroad Center had been pretty unhelpful. The flights for the May term
> were pre-purchased by the department. So I filled that in with the date that was
> after the summer program, and then I was contacted by the travel agency, and
> they were like, "We need $550 now." And I was like, "Pardon me?" And they
> were like, "Because you're differing from this group flight." I was like, "No. No.
> No. I never got that flight because I filled out this box."

When Jacques later found out that he could not get the financial aid he expected for the

summer, he had to change the ticket again since he was now only going to do the May

term course. This resulted in another even larger change of ticket fee of $885.

> So that started a very long drawn out process where I was having a lot of trouble
> [with] the Study Abroad Office where they were not very helpful with who I
> needed to talk to get this worked out. They didn't really help me get any of that
> money back, and when I appealed it, the Study Abroad Center didn't grant
> anything and were really pretty cold about it.

On top of this, he found out the French department would not accept his May-term

French literature course in France to count for credit in his minor:

> Then after I changed that flight, I found out that I wasn't getting French credit for
> the May term. And they just were very matter of fact about no one is getting
> French credit for that. So that was like a whole month where every day I found
> out something that I didn't want to.

Jacques articulated a feeling, expressed by several students, of being defeated by the

bureaucratic machine and not feeling like the campus was there to actually help students

through the challenges:

> Things were going wrong on two different sides of the same program. I was just
> bombarded with this sense that everything was just bureaucratic, and there was no
> way for me to actually succeed in this system. I was going to the Learning Abroad
> Center most days to be like, "This is not fine." And being met with either a
> student at a front desk who was like, "I don't really know how to help you," or a
> staff member who was like, "Mmm. Maybe you could have done this differently."
> And me being like, "No. You told me to do it this way, so I did it this way!"

> Suresh also felt deflated by the University rules. He had formed a sports club but

in order to apply for grants or funding, his organization needed to be in existence for 5 or

6 years. He wanted to reserve space in the field house with the recreation center, but his

group would have been charged $200 each time because they had not been around long

enough. He found the response to his situation to be very disheartening:

> [The sports club] was mostly the one where it was cold-hearted, where [they
> said,] "That's the thing. We're sorry." It was like there was nothing we can do
> about it, or you couldn't actually even talk to anyone about it. It was sad to some
> point. And it's like, "Can I meet the manager?" "Sorry." Like, "Why not? What
> are they doing back in the office?" "Nothing." "Let me go talk to them."

Suresh was not allowed to speak to a manager about the policy or find a resolution to the

situation.

A few other students also complained about certain systemic issues that might be found at many institutions. One common issue was course access. Earl faulted the University for not doing enough to ensure that students can get the classes that they need. He argued that part of the persistence problem was connected to students being unable to register for the courses that they needed when they needed them:

> The bureaucracy of having the proper classrooms and having the proper educational settings for students and making sure they get on track to graduate on time. You only have a certain amount of space, and you only have a certain amount of time. There always seems to be a problem, once or twice a year, for someone I know. No system's ever perfect, but in terms of making sure students are being able to register for classes, I felt the University could definitely work a little bit more on making sure everyone's a little more successful in getting their classes.

Some of the negative climate issues were simply the result of the standard structure of higher education and the hours of availability for professors or campus services. Carrie noted that with students' busy schedules it was challenging to take advantage of instructors' office hours or other campus services without missing class or some other commitment:

> I know it's everybody's problem, but it's really hard to put an hour in your schedule, especially that matches up with theirs. So I know a lot of times, if I had to do something, I would have to skip class or something. So I guess that would be the hardest because they don't do things on the weekends anywhere.

Hank also found it difficult to find a time to meet with advisers or professors for office hours.

> The adviser though and instructors are very hard. You don't get that kind of one-on-one kind of deal. Although they said that they always offer office hours and stuff like that, but the office hours always are not very flexible that can fit into people's schedule. They always give you options of e-mailing, but with the e-mailing, it's not that full conversation that you can really be able to explain a lot.

The low-income students in this study noted numerous positive experiences that created a caring and supportive environment, as well as numerous negative experiences that created a more uncaring and unsupportive environment. The mixed results from this thematic area match the mixed results in the other campus factor areas. Although involvement opportunities were almost uniformly positive, the students experienced some mixed results in their pursuit of educational and curricular support. The students had widely varying experiences in relation to support for diversity and community. In particular, students of color indicated numerous negative experiences related to this theme and urged the university to create an improved environment for diverse students.

Conclusion

As noted by the above listing of results and the many quotations and experiences shared by the low-income student in this study, various persistence factors emerged that aligned with the student factor areas and campus factor areas noted in the Persistence Pyramid framework. These 21 low-income students in the study illustrated the many themes and sub-themes that they perceived to be relevant on their path to baccalaureate degree attainment. Many of the thematic areas included student experiences that both helped and hindered their persistence.

Chapter 6
Summary, Discussion, Implications, and Conclusions

The purpose of this study was to utilize my proposed conceptual framework, the Persistence Pyramid, based on the extant persistence research to examine the various factors that help and hinder persistence for low-income students, with the goal of revealing which factors low-income students believe to have the greatest impact on their path to a bachelor's degree. In addition, this study explored the ways in which various persistence factors interacted with each other to diminish or enhance positive or negative effects.

This study was based on interviews with 21 Fall 2008 full-time first-year Pell Grant recipients in May 2012 when 20 of the 21 were at or near the point of degree completion. The study was not designed for a comparative analysis between low-income students who are successful and those who are not, but the design was intended to capture students at the point of graduation to illuminate the ways that low-income students can be successful. Extensive literature has identified substantial obstacles to persistence for low-income students and gaps in their graduation rates compared to other students. Thus, the success represented by most of the students in the study is truly remarkable and provides a clearer understanding of the ways in which low-income students can and do find ways to navigate the hurdles on their pathway to degree completion. The results from the study are noteworthy as they highlight those factors that hindered persistence for these low-income students and illustrate those factors which were most helpful in overcoming obstacles and ensuring ultimate success.

Using the eight areas of the Persistence Pyramid as an exploratory framework was effective in illuminating the saliency of various factors on low-income students' persistence. All eight areas—four student factor areas: (a) economic, (b) social, (c) psychological, and (d) academic factors, and four campus factor areas: (a) educational and curricular support, (b) support for diversity and community, (c) involvement opportunities, and (d) a caring culture—had at least two or more themes that emerged as salient to students' persistence, and many of the themes had additional sub-themes that were also relevant in explaining factors that enhanced persistence and those that hindered persistence. Figure 3 portrays visually the saliency of various factor areas and themes on the persistence of the students in this study. The factor areas with the largest hexagons had the greatest impact and the larger the font size, the greater the effect of particular themes in that area. The grey-scale shading of the hexagons represents the degree to which the students' experiences related to those themes were positive or negative. The background shades range from very dark grey, mostly negative experiences, to very light grey, mostly positive experiences.

At least to some degree, many of these factors exacerbate and interact with the other factors for most of the low-income students, which creates a very challenging picture for their persistence path. Not surprisingly, the economic factors were very relevant and had a substantial effect on many of the other factors of persistence. The economic factor area most clearly authenticates the Persistence Pyramid's design to illuminate the way that various persistence factors intersect. Various demographic characteristics combine with students' actions and interact with students' circumstances
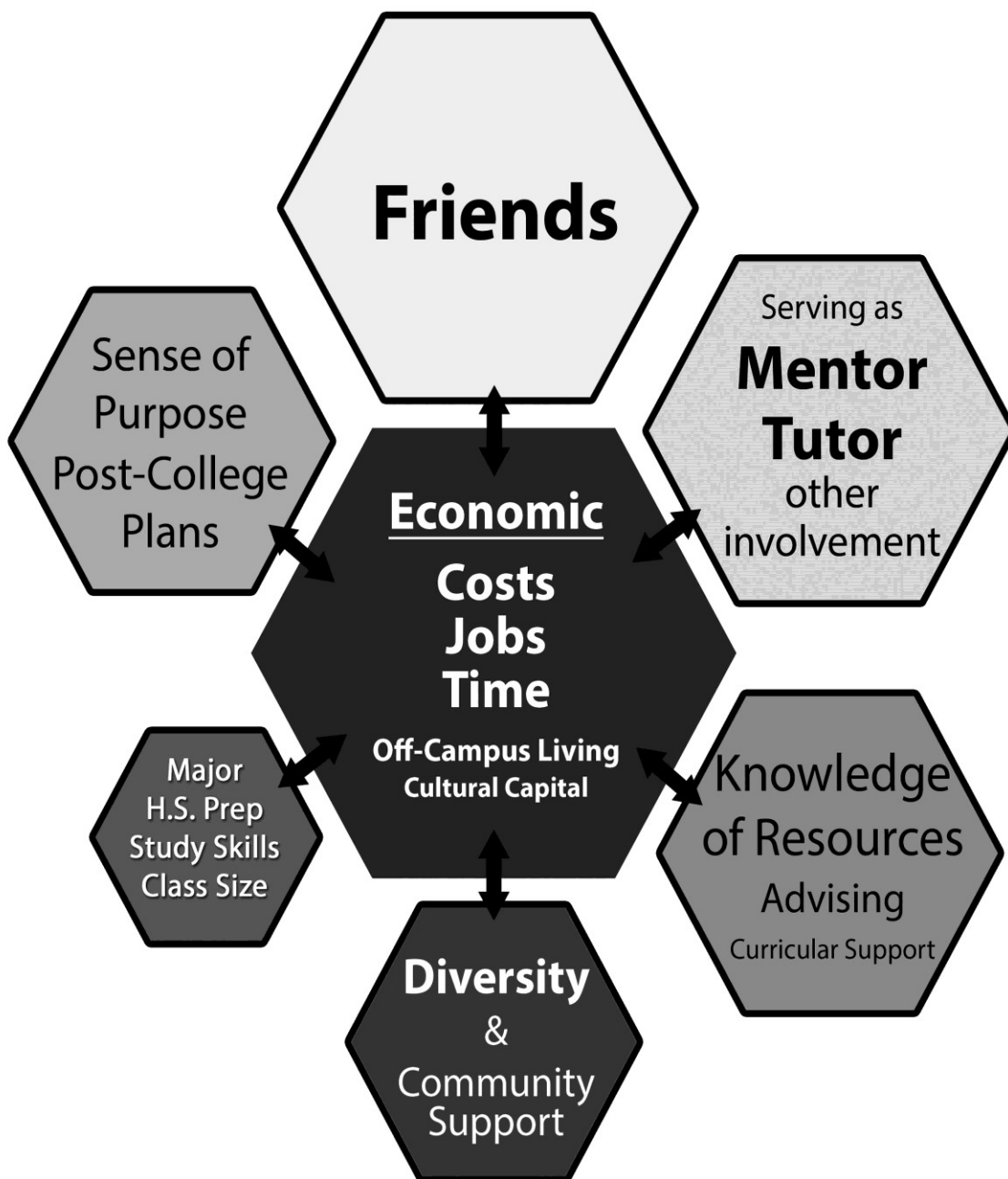
Figure 3. Saliency of Selected Persistence Factors and Themes

and the campus environment to create a complex persistence pyramid for each student, which illustrates the ways that various factors of persistence intersect on the path toward baccalaureate degree completion. For example, many of the low-income students in this study had work and family responsibilities that made it difficult for them to connect with campus as fully as they would have preferred. These work and family obligations made it challenging for them to have enough time for studying, or employing resources such as tutors, study groups, unpaid internships, or other experiences that may have made it easier for them persist to the point of graduation. However, several other themes emerged as particularly salient in creating positive factors that were particularly helpful in overcoming these obstacles. In particular, social factors related to having friends on campus and having had the opportunity to serve in the role of mentor or tutor were two factors that emerged as substantially influential in helping students reach the point of baccalaureate degree attainment.

Although this sample included primarily students who were successful, even these low-income students had many challenges. Although most were able to find enough activities and resources to make it through and reach the point of graduation, it is easy to see why many low-income students do not persist to degree attainment. This study appears to support expanding Tierney's (1992) critique of Tinto's retention model to include low-income students and all underrepresented students. This study suggests that focusing primarily on the demographics of students, and what students do or do *not* do while in college, will obscure the degree to which student success is affected by a myriad of external factors and forces that occur outside of the students' experiences on campus.

In addition, such a focus minimizes the responsibility of institutions to supply the appropriate resources and opportunities for all students required to support students' various on- and off-campus experiences and circumstances.

If one imagines the various factors of the pyramid as providing a safety net for low-income students, one can see the necessity of ensuring a wide-range of positive features that need to be in place along all of the factors to ensure that there are enough safety mechanisms to catch and support almost all low-income students who otherwise may "fall through the cracks" or have a multitude of risk factors that make degree attainment a much lower possibility. For the low-income students in this study, each of them had multiple points of support that allowed them to persevere through their tribulations. The one exception to that is Patrice, who did not appear to have the same level of connections or support, and she is the one student in the sample who neither reached graduation nor was on a clear path to achieve degree attainment eventually.

Discussion of Findings and Connections to Previous Research

Reflecting upon the experiences of the 21 low-income students in this study, it is clear that much of the previous research on persistence is relevant to understanding their pathway toward baccalaureate degree attainment. However, it is clear from this study that low-income students frequently experience additional burdens and obstacles which are less prevalent in the lives of their high-income peers. For example, previous retention research has suggested the powerful advantage of living on campus, but the students in this study demonstrate how low-income students are less able to take advantage of the benefits of living on campus (Lee, 2002). Yet, the students in this study were able to

utilize opportunities, resources, and support from a variety of sources to overcome obstacles and ultimately reach degree attainment. The various factors that helped and hindered their persistence are useful to understanding which risk factors are particularly troublesome for low-income students, and which positive factors are particularly useful for increasing persistence. In addition, the successes of these students suggest fruitful areas that may increase persistence for all students or other subsets of students, not just low-income students.

Economic

The various persistence factors related to the overall economic theme had the most widespread impact on students' ability to persist, and represent those areas that were most likely to hinder progress toward degree attainment (e.g., needing to work too many hours or being unable to live on campus). In addition, the various themes and sub-themes connected to economics were most likely to interact with the factors from other areas of the Persistence Pyramid, such as involvement opportunities. Most of these interactions were negative, i.e., some factors related to economics retarded the comprehensive maximization of other factors that would have enhanced persistence. The basic costs of paying for tuition and all related school expenses threatened the students' ability to attend. Most of them noted that without the Pell Grant, they either would not have attended or they would not have persisted to the point of graduation.

The total expenses of college forced them to make difficult decisions that prevented them from choosing those options that would have increased their chances for degree attainment, such as living on campus or working fewer hours at paid employment.

Previous research has indicated that living on campus increases persistence through

enhanced involvement in campus activities and student groups, and increased interactions

with faculty and peers (Engle & O'Brien, 2007). Regrettably, less than half of the low-

income students in this study were able to take advantage of those increased opportunities

because they could not afford the costs involved with living on or near campus for most

of their time at the University.

One of the most prevalent themes that emerged related to economics was paid

employment while attending college. Almost all of the students had jobs and internships

throughout most of their time in college, some were working full time during the

academic year, some had more than one job or internship at a time, and some worked up

to 60 hours per week during the summer. The number of hours that many of these

students needed to work diverted them from other activities that would have made them

more engaged on campus and improved their academic success. The theme of jobs had

the greatest negative interaction with other factors in the extent to which their

employment prevented them from studying and engaging in other academic activities,

student groups, and campus events. Although their paid employment provided them with

some positive benefits such as career experience and time management skills, the many

hours of work exacerbated one of their primary obstacles connected to the economic

themes: time. These students were at risk for not persisting because they simply did not

have enough time to engage in the educationally effective activities that would increase

their persistence because they had too many work obligations, as well as other family

obligations. Previous research has also noted than low-income students are often required

to work burdensome hours at paid employment which hinders their involvement and engagement on campus (Walpole, 2003). In addition, commuting emerged as another economic-related theme that added to their time scarcity, because some of these students could not afford to live on campus. Avoiding a lengthy commute and living on campus would have enhanced their persistence.

The final economic-related theme that emerged as relevant was the lack of cultural capital that several of these students experienced because 15 of the 21 students were first-generation college students. For some of these students, their families were unable to assist them in navigating the complex bureaucracy of higher education, which put them at risk for not persisting. As evidenced throughout these economic themes, many of these students faced substantial persistence hurdles related to being low income. However, they were able to successfully counteract those negative factors with various factors that aided their persistence.

Social

Positive social factors related to persistence were one of the most prevalent ways that these low-income students increased their chances of degree attainment by relying on others to help support them through challenges that they were experiencing. The number one factor that students cited in their ability to persist was friends, and the extent to which they relied on their friends for academic assistance and emotional support. Friends emerged as the most salient positive theme that pushed students into degree attainment. These low-income students relied on their friends for social connections as well as

emotional support and encouragement. They engaged their friends in various roles as study partners, informal tutors, and informal mentors.

These students also received emotional and academic support from faculty and instructional staff, but they indicated a desire for more instructors to clearly demonstrate their concern for students. The students indicated that they wanted faculty to get to know them personally and to openly demonstrate that they care about the students and their academic success, and to profess their belief in the students' ability to be academically successful. Many of the students had some type of mentorship from a faculty member, a graduate student, an undergraduate student, or a community member, but their experiences with mentors were a mix of positive and negative.

Although most of these students were able to develop positive social connections which aided their persistence, many of them cited numerous factors which created feelings of isolation and prevented them from fully engaging in some of the social opportunities. The number one factor preventing full use of social connections was time constraints, especially from employment obligations. Several of these students also experienced social isolation due to a significant cultural shift from their previous experience living with their families, especially for the seven immigrant students in the study. Living off campus and commuting also played a role in muting the possible positive effects of social connections on campus.

Psychological

The most salient psychological factor that aided persistence for the low-income students in this study was having a sense of purpose as to why they were in college and

what they were trying to achieve. As noted by Chickering and Reisser (1993), developing purpose is vital for students' persistence and this was evident in these students' experiences. Many of the students were able to articulate a clear purpose for earning a bachelor's degree. By keeping that goal in mind, some of the students found it easier to persevere through various obstacles because they could envision the after-effects of persisting to degree attainment. Many of the students were also motivated to succeed based on expectations they experienced from their families, their communities, and themselves. In addition, having clear career or other post-baccalaureate educational plans were vital psychological motivators for these students to strive for degree attainment since they understood that they could not complete their plans without a bachelor's degree. The final psychological factor that emerged as supporting persistence was support from families, both emotional support and financial support. For many of these low-income students, the support was primarily emotional. About one-fourth of the students in the study received very little financial support and very little emotional support from their families. Those students perceived an increased psychological burden from feeling as though they had to do it all on their own.

Academic

Various academic factors affected the persistence of these low-income students, and their low-income status influenced a variety of academic decisions that they made. One of the most predominant effects was on students' choice of major. Many of these students were encouraged by their families to pick a major that would lead directly to a well-paying career or enable them to pursue a health career by enrolling in pharmacy,

dental, or medical school after graduation. Such a narrow range of options can be a serious hindrance to persistence if the student is not academically strong in the math, science, engineering, or business courses required for their major or if they have little interest in the subject matter. In addition, if the original plan is not working out and the student has to switch majors and post-collegiate plans, the potential delay in graduation and additional time and money required may prevent completion. Several of the students in the study had to change direction and some of the students had to force themselves to stay motivated to study subject areas that they were not intrinsically motivated to study.

Low-income students are more likely to also be first-generation students and they are more likely to attend high schools that are less academically intense (Terenzini, Cabrera, & Bernal, 2001; Ishitani, 2006). Thus, they are less prepared to be successful in college courses and may experience more challenges adjusting to both the course content and course format in their college classes. Many of the students in this study were affected by their low-income status because they did not have the same level of rigorous high school academic preparation that many of their classmates did. As a result, they struggled in learning the material in some of their courses, especially in math, science, and languages.

When low-income students attend less-academically intense high schools, they lack not only adequate preparation in the subject matter, they lack adequate study skills required to be successful in college courses. Many low-income students, who may not have had AP classes or other experience with college-level course work, may struggle to adjust to the academic rigor that is required to be successful in college courses, especially

at institutions with very high research activity. Plus, their time-constraints due to

employment and family obligations made it challenging for them to find adequate time to

study and put forth the effort necessary to be academically successful.

Many of these students also struggled with the format and teaching style of many

college courses, and they desired smaller class sizes and more direct support and

assistance from their instructors. Many of them felt self-conscious about their academic

preparation and abilities compared to their classmates, which hampered their

participation in the classroom. For low-income students who may lack the academic self-

confidence, having smaller classes where they can make friends and meet study partners

may be particularly beneficial. As noted by the experiences of the students in this study,

once they get comfortable enough with their classmates, they are able to ask questions

and learn from each other.

Educational and Curricular Support

To counteract some of the potential challenges that students bring with them to

college, the low-income students in this study took advantage of the many resources,

opportunities, and support systems on campus to increase their chances of persistence.

Numerous research studies have demonstrated the positive effects of various academic

support services provided to students (Kuh, 2006). They used a variety of campus

academic support services that were offered to counteract the challenges that they were

facing. Some of the support services were more helpful than others, and numerous

support services provided both positive and negative interactions. The students generally

found the writing center and the tutors on campus to be helpful, but wished that those

providing the assistance had more time available to spend with the students when they were struggling on certain subjects or assignments. Several students derived particularly significant benefits from participation in a study skills course.

In terms of support services, advising was noted as especially important for these students. Several of these students indicated that their adviser was one of the most important factors in helping them reach the point of graduation. Their positive experiences with advising mirror previous research that suggests that proactive and intrusive advising programs can be one of the most important factors in effective retention efforts (Engle & O'Brien, 2007). They appreciated the support, advice, and encouragement they received from their adviser and the close relationship that they had. However, a few students had a negative experience with advising, which was especially discouraging when they believed their adviser was not confident in their ability to succeed. The students indicated that they wanted advisers to provide ample encouragement and faith in the student's academic abilities. In addition, a few students had an almost nonexistent relationship with advising because their adviser changed frequently, which the students did not perceive favorably.

Other curricular support programs that these students noted as especially beneficial included summer bridge programs, courses-in-common, and Welcome Week. Numerous research studies on retention and persistence suggest that engagement programs and support services improve retention and persistence rates for students (Kuh, 2006). However, institutions should be very intentional about such programs and ensure quality control, since merely offering tutoring or some program will not guarantee

improvements in persistence. Several students in this study noted signing up for living-learning communities in their residence halls, but discovered little or non-existent programming attached to those communities. Requiring groups of students to take a set of courses-in-common, either as a cohort or some other grouping, may be especially beneficial to low-income students who may not be as comfortable with other students or the educational system.

Although the students noted a great deal of positive academic support on campus, their number one complaint and recommendation to the institution was for the University to do a better job informing students of all the resources available. Previous research has suggested that low-income students' lack of cultural capital decreases their awareness and utilization of the various support resources (Engle & O'Brien, 2007). The students in this study noted that they were made aware of many of the resources during Orientation and Welcome Week, but that it was difficult to retain all of the information and options. They encouraged the institution to discover ways to get students connected to the resources at the point that they need them.

Support for Diversity and Community

Even with the effective use of the numerous support services provided, many students experienced a challenging environment. In particular, students of color did not feel as welcomed and supported as they would have liked. Previous research has indicated that having and supporting a diverse student body on campus is beneficial to all students on campus (Milem & Hakuta, 2002). Yet, students of color are unlikely to persist if they do not feel supported on their campus, which can be especially challenging

for underrepresented students at predominantly White institutions (PWI). The twelve low-income students of color in this study experienced numerous instances in which they did not feel supported. Although they generally applauded the University for its attempts at providing service and support for students of color and diversity in general, the overall perspective was not uniformly positive. In particular, the students of color expressed a sense of isolation from feeling as though they were the only person of color in their classes or in their major. This sense of isolation affected their academic self-confidence and forced them to question whether they belonged here. They noted that their classmates did not trust their work in class or were insensitive by using racially-charged comments. They urged the University to increase the number of students of color on campus and pay particular attention to increasing diversity in particular colleges and majors where certain racial and ethnic minorities were particularly underrepresented. They also encouraged faculty to do a better job reaching out to students of color and supporting them. Landry (2002) indicated that a transformed curriculum that was more inclusive of diverse perspectives coupled with faculty members that were more explicitly supportive of students of color could increase persistence for students of color. Unfortunately, the experiences of the students of color in this study suggest that such changes have not been fully implemented.

The nine low-income White students in this study characterized campus diversity in mostly positive terms. Since many of the White students came from environments that were predominantly White, it was not surprising that they considered the campus to be diverse. If they came from an area that is more than 95 percent White, then coming to

campus, which has over 25 percent domestic students of color and international students, will appear quite diverse. Also, since the White students are unlikely to experience much racial discrimination or harassment themselves, from their perspective it is not surprising that the campus appears very welcoming to diverse students. They see racial, ethnic, and religious diversity in the student body and observe a wide variety of multicultural events and student groups, and therefore conclude that the campus maintains a wholly positive environment for diversity support.

Many students of color counteracted their feelings of isolation by creating a sense of belonging with a community to which they formed a feeling of connectedness. For many of the students of color, this included student groups that had a particular racial or ethnic component with which they identified. Some students found community through their major, their place of employment, or off-campus communities. Students also found a sense of community through their identification with campus and the institution. Most of the students noted that they felt connected to campus and the Muskie mascot. Even if they did not specifically identify with any of the sports, most of the students still considered themselves a "Muskie." Often this occurred through sporting events or other official campus activities, but some students experienced this sense of institutional connectedness simply from being on campus or being involved in research.

Involvement Opportunities

In general, these students counteracted many of the negative hurdles to persistence that they were experiencing through involvement opportunities. Numerous studies have supported the notion that students' involvement with campus events and

activities will improve their chances of degree attainment by connecting them to campus and enhancing their commitment to the institution and, subsequently, the goal of graduation (Pascarella &Terenzini, 2005). The low-income students in this study were highly engaged. Some of these students indicated that their involvement activities had the greatest impact on their ability to persist. In particular, serving in the role of a mentor or tutor was the singular most significant factor that increased persistence for this group of low-income students. At least three-fourths of these students had at least one experience serving as a mentor or tutor. Serving in these roles appeared to give these low-income students a significant positive change in their sense of agency by being in a position of authority and expertise. This increased their self-confidence and gave them a greater appreciation for their own educational opportunities. Moreover, with other students looking up to them, they felt obligated to succeed and complete their degree. These experiences also made them more familiar with the campus resources that were in place to help students succeed, since they were communicating that information to other students. As a result, they were more likely to understand the academic material or use the resources more effectively, based on their role and knowledge as a tutor or mentor.

Closely connected to tutoring and mentoring, almost all of the students were engaged in volunteer work or some type of community service work. The number of students engaged in volunteering and the number of opportunities and amount of time they devoted to such service work was striking. It was surprising that so many of the students were able to find so much time in their hectic schedules to devote to volunteering. Several of the students emanated a strong, selfless dedication to others,

which may have been correlated to their success. The service work was demonstratively

meaningful to the low-income students in this study. The students felt a sense of

obligation and pride in being able to give back to the community in appreciation for the

opportunities they were given. Many of them appreciated all the opportunities they had

and the situation they were in compared to the people they were helping. Not only did

this service infuse their lives and personal journeys with meaning, they found it easier to

overcome their own obstacles and challenges when they reflected on the struggles that

others were experiencing. The experiences gave them a sense of hope and optimism

about their own personal situations and propelled them to strive forward. In addition,

volunteering gave the low-income students a break from the other stresses and

responsibilities in their lives, while helping them gain an appropriate perspective.

In addition, these students participated in many campus activities, including music

concerts, theatre and arts performances, sporting events, and speakers on campus. Almost

all the students participated in at least one student club, organization, or Greek life. Half

of the students participated in a study abroad program and most of those students

concluded that the experiences abroad gave them a vital boost to their self-confidence,

which aided their persistence. Almost half of the students participated in research, which

was vital in helping them connect with faculty and figure out their long-term goals and

career aspirations.

Caring Culture

Many of the low-income students in this study were involved in activities that

increase the likelihood of their persistence. When students believe that the institution is

investing in their success, then the student is likely to engage in those activities that increase academic success and make them feel committed to their institution. Those commitments to participate in educationally sound activities and connections to campus will increase students' persistence. Thus, colleges who want to increase students' persistence are likely to experience increase success if they are equipped to maintain an "ethic of care," whereby faculty and staff take time to be involved with students' lives and demonstrate care and concern. Ideally, when students interact with faculty, staff, and other institutional interactions, students should encounter a caring culture that is centered on service to students (Kuh, Schuh, Whitt, 1991).

Overall, the low-income students in this study considered their college experience positively. They appreciated the many interactions that they had which were positive and supportive. They had particularly positive fond memories about experiences where faculty, instructors, or staff members made a special effort on their behalf. However, most of the students still encountered numerous highly negative interactions with staff, faculty, service offices, and bureaucratic systems that left a lasting impression of an unsupportive or indifferent environment. These students were especially affected when faculty or advisers appeared to lack confidence in their ability to succeed in a particular class or major. In addition, students felt crushed under bureaucratic rules that appeared to leave no flexibility for students' particular situations.

Strength of Persistence Factors

The economic factors area in the Persistence Pyramid emerged as having the greatest impact on persistence overall. This is not surprising that these factors would have

some of the greatest effect on persistence for low-income students, since the lack of economic resources delineates this group of students. What was revealing was the extent that the economic factors affected so many of the other areas of the Persistence Pyramid and interacted, often negatively, with the persistence factors in other areas. For example, needing to work a lot of hours at paid employment or needing to live off campus and commute had a negative impact on students' ability to devote sufficient time to studying and school work, as well as their ability to connect with faculty or others on campus or participate in campus activities and involvement opportunities to the fullest extent.

Six of the remaining seven areas of the Persistence Pyramid, all but Caring Culture, emerged as having a substantial impact on students' persistence. Each area had various factors that the low-income students in the study noted as having an important effect on their progress toward degree attainment. The more informative aspect of the study is which particular factors were noted as exceptionally impactful on persistence, and which themes in each of the factor areas emerged as most relevant in that area. Certain singular themes emerged as particularly prevalent in their dramatic effect on persistence. Under the umbrella of social factors, friends emerged as the most important factor in student persistence. Almost all students mentioned friends as a positive influence on their ability to persist. More students in the study indicated friends as the number one reason or one of the most important factors for their persistence than any other factor. The campus factor that emerged as the most important was students serving in the role of tutor or mentor under the umbrella area of involvement opportunities.

Although not all students served in this role, most of them did, and most of them indicated that it had a profoundly positive effect on their ability to persist.

In each of the student factor areas, certain themes emerged as having a particularly strong effect on persistence. In the economic area, all of the themes and sub-themes emerged as having a substantial impact on persistence. Issues and concerns around the costs associated with attending college was the most prevalent theme and permeated all the other economic factors as well as most of the other areas of the Persistence Pyramid. In addition to costs, the other most prevalent theme under economic factors was paid employment and internships, which emerged as having a mostly negative impact on persistence. As noted earlier, friends emerged as the most important theme under the social factors. Under the psychological theme, sense of purpose along with a clear career or goal direction emerged as having a dramatic effect on persistence. Under the academic theme, choice of major, high school preparation, and study habits all emerged as important.

For campus factors of the Persistence Pyramid, under the educational and curricular support umbrella, the two most salient themes that emerged were advising and awareness of support resources. Under the support for diversity and community, the strongest hurdle to persistence for students of color was feelings of isolation, especially in the classroom. Overall, involvement opportunities emerged as the most important campus factor for increasing persistence. Various engagement activities emerged as important, especially study abroad, volunteering, student groups, and participation in research.

However, none of those emerged as strongly as serving as a mentor or tutor which appeared to have a profound effect on the students and their persistence.

Of the eight sets of persistence factors in the Persistence Pyramid, the Caring Culture factor area garnered the weakest amount of support in this study. Although it was still present, it did not come across in students' experiences as having the same level of impact on their persistence as the other seven sets of persistence factors. For low-income students who experienced numerous incidents of an uncaring culture and did not persist, it is possible that those experiences were of greater significance than they were for this group of successful low-income students, who were able to counteract those negative experiences and persist.

The strength of the effect of economic factors on the persistence of these low-income students was particularly noteworthy, but even more remarkable was how these students reduced the negative effects of their economic circumstances on their persistence through positive social connections, appropriate psychological orientations, and any necessary academic adjustments. In addition, the low-income students in this study enhanced their persistence efforts by utilizing various forms of campus support and by taking advantage of the resources and engagement opportunities offered by the institution. Therefore, this study suggests that if an institution creates a supportive culture and a positive learning environment coupled with academic support resources and involvement opportunities, the low-income students at that institution will have occasions to increase their chances of degree attainment to the extent that the students take advantage of the resources and opportunities made available to them.

Implications

Several key areas emerged from this study that suggest some overall implications for increasing persistence for low-income students. Economic factors have a dramatic effect on many persistence factors for low-income students. Covering the cost of tuition is not enough to cover all the related costs involved in attending college and does not begin to address all the related issues and factors of persistence that are affected by being low-income. As a result, policymakers, higher education administrators, and student service personnel should consider the myriad of factors that hinder low-income students' persistence. Factors such as too many work hours, long commutes, poor living situations, family obligations, lack of cultural capital, and other factors related to being low income will have dramatic effects on such things as study time, study skills, ability to participate in engagement activities and ability to connect with friends, classmates, and campus. Gaining a full appreciation for the ways in which all of these factors interact, especially for low-income students, could improve policy decisions and retention and persistence efforts.

The two other themes that emerged as most strongly affecting persistence--serving as a mentor or tutor, and the vital role of friends--should prompt exploration of programs that would support students and their persistence in relation to these two themes. First, exploring options where all low-income students serve as a mentor would appear to have a meaningful impact on persistence. In addition, where appropriate, having low-income students serve in a tutoring role also could be beneficial. Second, ensuring that low-income students have ample opportunities to make friends and ensuring

that students are connecting with classmates or other peers on campus, should be considered as a possible avenue for increasing persistence.

Policymakers

At both a national and state level, government policymakers should consider generous funding of scholarships and grants for low-income students that exceed the cost of tuition and cover almost all related expenses. Lack of comprehensive funding reinforces the cycle of poverty and wastes the money that is currently spent on low-income students because without persisting to the point of degree completion, the objective for both student and government is not achieved. The student is left saddled with debt and no increased earnings from a degree to pay back the debt. In addition, some scholarship and grant funding could be tied to particular requirements that will increase persistence for low-income students and hold both institutions and students accountable. For example, some scholarship money could require participation in research, service learning, tutoring, or volunteer work. Some grant money could require participation in on-campus jobs that connect the student to campus that the institution is required to provide. Perhaps some institution-based funding for housing is designated to provide free on-campus housing to low-income students.

Higher Education Institutional Administrators

Administrators and others who make policy decisions at institutions of higher education should consider the myriad ways that low-income students are affected by policy decisions, many of which could either hurt or help their persistence. For example, when figuring the cost of attendance and awarding financial aid packages, the cost of

attendance should account for all related expenses. In addition, financial aid packages could be tied to requirements that increase the ability of low-income students to engage in behaviors that will increase persistence. For example, rather than give a certain allocation of money that can go toward living expenses, institutions could provide a voucher for free room and board on campus for low-income students. There may be some cultural groups for which such a requirement would not be appropriate, but insisting on living on campus, whenever possible, would benefit students and help them negotiate obligations and requests from their families.

Since many of these students will need paid employment, institutions could provide job guarantees with specific funding sources (e.g., federal work-study money along with dedicated institutional funding) that are reserved for low-income students. Rather than typical work-study that requires the student to secure a job in order to receive the funding, reserve particular campus jobs that only low-income students can acquire. Institutions could ensure that these jobs are meaningful and connect the student to campus in ways that will increase their persistence, for example, by providing employment to help faculty with research or in student service offices, rather than employment as parking attendants or in food service positions. Institutions could develop positions that will encourage the acquisition of long-term career skills or connect students to resources that will increase persistence. Certain jobs would naturally lend themselves to these benefits, including working in a lab, serving as a mentor or tutor for a particular program, and working in resource centers where that extra knowledge about campus and resources would benefit low-income students, such as diversity offices, advising offices,

career centers, writing centers, and student activities offices. Clearly the students in this study experienced much greater connection to campus when they were employed in these types of positions compared to their work in off-campus employment that was not connected to an internship and was primarily seen as a way to pay bills. If an institution does not have enough of such quality positions for low-income students, then institutions could connect student positions to additional skill development. For example, institutions could have food service positions that include menu and nutrition planning or development of marketing plans to students.

Low-income students clearly articulated that they need and want additional academic support services. As a result, institutions might provide as much access to tutors and academic support personnel as possible. Students derived benefit from working with tutors in a wide variety of areas, not just math and science. Students want to spend more time with tutors, so increasing the number and hours available would be useful, especially during peak times. Providing writing and research support was also vital. Institutions could develop peer-assisted learning in as many courses as possible, especially large lecture courses. Plus, when students are the ones providing the assistance, the tutor also has an increased chance of persistence. Institutions might provide good advising and career support, offer study skills courses and related major and career exploration courses, and minimize adviser changes.

Institutions could create a culture of expectations that students will graduate in four-years, creating a cyclical self-fulfilling prophecy. As more students finish in four years, fellow classmates create that expectation that students graduate in four years, for

themselves and their friends. This expectation creates an overall expectation and sense of

obligation among students to figure out a way to finish in four years, since that is simply

what everyone does and it is not questioned. Many of the students in this study did feel an

expectation among their friends or their communities to finish in four years, but the

strength of this expectation was not universal. Institutions could strengthen the four-year

graduation expectation while providing the necessary support to ensure that degree

completion is realistically attainable in four years for almost all students.

Institutions could create a culture of campus identification and pride by providing

opportunities for students to engage with campus and feel connected to the institution.

For example, institutions could develop programs during Orientation, Welcome Week,

and particular milestones throughout their four-years that cultivate traditions where

students identify as a "Muskie."

In addition, institutions should strive to provide a culture of support that expresses

caring and concern, and demonstrates a profound and visible support for diversity that

goes beyond appearance to really resonate at the deepest levels. Diversity should be

visible in the staff, the faculty, and the students: any appearance of tokenism could

backfire. Institutions should be cautious about lumping all students or all students of

color under the "diversity" umbrella. Schools could clearly articulate designated services

and support for various demographics of students. The most important goal that will

create the most significant improvement for supporting diversity is to educate students

and increase their facility with diversity. Although this is also extremely important for

faculty and staff, it was with other students where these low-income students observed

the greatest need for improvement. Students of color felt the greatest challenges and isolation among their peers. Students of color suggested that their peers did not appear to trust them or their academic abilities, value them as equals, or understand much about their culture, traditions, or perspectives. This perspective gap was particularly evident in their experiences in the classroom and on group projects and homework.

Faculty

The faculty and instructional staff at institutions of higher education should be encouraged to discover ways to connect with students in their classroom and demonstrate care and concern for them personally and for their academic success. Faculty could attempt to learn students' names and a bit about them so that they could relate to students on a personal level. Faculty could exhibit confidence in their students' ability to succeed and demonstrate a willingness to work with the students to achieve academic success in their courses. When instructors are working with a student who is struggling in their course, they could be sure to provide support and encouragement. They could work from a positive perspective when providing criticism of a student's work. When illuminating areas that need improvement, they could be careful that their language choices are not overly negative. The key is to provide students with hope that they can be academically successful and help them develop a plan to achieve that success.

Faculty could break courses down to smaller units and discussion sections or group activities where students can get to know each other and work with smaller sub-sets of students in the course. Instructors should cultivate opportunities for students to interact, make friends, and study and work together. Such opportunities could include

group projects, group study sessions, and matching each student in the course with another classmate as a "study-buddy." In addition, faculty should be encouraged to find ways to include undergraduates in their research and service activities.

Faculty could agree that student evaluations that measure teaching as well as other student interactions and involvement could become a more substantial part of the tenure review process and be featured in post-tenure reviews. Faculty could work with administrators to reward faculty who place a high priority on undergraduate education and reward those who involve undergraduates in their research or service work.

Student-Service Personnel

Advisers, career counselors, and other student-service personnel should ensure that students are making friends and making connections with other students on campus. They could help the students become engaged with campus through various involvement opportunities. They should verify students' understanding, awareness, and utilization of academic resources and other campus resources and support services.

Several of the students noted that they wanted an earlier awareness of resources and opportunities. As someone who has worked in academic advising for almost fifteen years and is very familiar with Orientation, Welcome Week, and other communication efforts by universities, I recognize the frustration that many in the student services profession experience in attempting to get students the information that they need and when they need it. I know that students are presented with information about resources on numerous occasions and through various modalities and programming efforts. However, the students are still not getting the information at the moment they are ready and able to

received and utilize that information. I am not sure what the answer is, but clearly institutions and student-service personnel must continue to find better ways to get students the information and resources that they need and at the time that they need them.

Specifically in advising, advisers could check students' understanding of requirements, academic rules, and academic resources. Advisers could demonstrate support for students and confidence in their abilities to be academically successful, even when that may require a change in major or career trajectory. Advisers could openly demonstrate care and concern for the student and approach their advising from a holistic perspective that captures the range of issues and factors faced by each individual student. Advising services could minimize students transitioning from one adviser to another, but when a switch is necessary, advisers could assist in messaging and supporting that transition to assure students that they will be helped and supported.

Both advisers and career counselors could help students develop a goal and sense of purpose early in their undergraduate career. They could assist students in understanding and articulating why they are in college and why they need the degree to reach their long-term goals and expectations.

Students

The low-income students in this study had numerous recommendations for their fellow students about ways to be successful and persist to graduation. They encouraged future students to make friends and to study and do homework with friends and classmates. Students could seek communities where they feel comfortable and able to create a sense of belonging. Students could also attempt to take pride and identify with

their institution. The students in this study suggested that future students learn about and utilize the available campus resources as soon as possible, including connecting with faculty and staff on campus. Future students are encouraged to seek help and advice frequently from advisers and career counselors and to take advantage of major and career exploration courses and study skills courses. Students could work with mentors and tutors and could also serve as a mentor or tutor. Students could find on-campus employment, ideally in a job that will provide long-term career skills. Future students are encouraged to get involved early and often by discovering numerous engagement opportunities, including participation in research student groups, campus activities, study abroad, and volunteering.

Parents

This study also provided implications for the ways in which parents can help their children succeed and persist to the point of degree attainment. Some of the parental implications might be especially challenging for some low-income parents, but there are some basic recommendations that almost all parents could employ. Parents should allow for some transition to college and some separation from family and familial obligations. Parents can encourage their children by communicate strong support for the student and their goal of earning the degree. Parents can set high expectations for degree completion and academic success while still providing the emotional support to encourage that success.

Parents could, where possible, provide financial support, even in small amounts, to communicate a strong psychological message to the student about the importance of

earning the degree and familial support for that goal. Parents can assist their children with living on campus wherever possible and check in with them frequently to ensure they are making connections on campus and making friends. Parents should help their children connect with the resources available on campus and ensure that their children are utilizing those resources.

Parents can also help their children understand that major does not equal career in the majority of career fields. Parents can help their children focus on skill development. Helping a child recognize and develop their strengths greatly increases their chances for ultimately being successful. Parents can help students by not enforcing a pre-determined major or career trajectory, if those plans do not coincide with the student's passions and abilities. Parents can help their children understand that if they are unhappy with their choice of major or career trajectory, then they may not succeed in college and may not ultimately pursue or succeed in that particular career anyway.

Limitations and Delimitations

This study has several limitations and delimitations with respect to understanding issues of persistence for low-income students. One primary delimitation is the setting of the study. All participants were from a public doctoral-granting university with very high research activity. Thus, some of the findings and implications may not apply to students at two-year institutions, where many low-income students begin their journey toward a bachelor's degree. Also, the findings may not apply as well to other types of four-year institutions compared to large urban doctoral-granting institution with very high research activity. The other delimitations of this study are defined by the context of the case. Since

I interviewed only students who started as first-year students at the study institution in Fall 2008, I did not capture the experiences of low-income transfer students nor the experiences of low-income students that began their study during other time periods. Thus, the results of this study may not be applicable to low-income transfer students. Transfer students make up about half of all undergraduates in the United States and about one-third of undergraduates at the study institution.

The limitations of this study include issues related to its generalizability. Since it is a qualitative study with a necessary small sample size, the study is not inherently generalizable. However, the sample size of 21 is very reasonable for a study based on in-depth interviews and the sample included a good representation of Pell Grant recipients in terms of race/ethnicity, academic area, gender, and first-generation status. One cannot generalize from this study to all low-income students or for any sub-group based on the experience of a few students. However, the good representative sample and the degree to which various factors and themes emerged as salient for many of the students in the study suggest that many of the issues are relevant to a much larger group of low-income students.

This study focused on low-income students, defined as being Pell Grant-eligible. According to the research literature, all the areas listed in the Persistence Pyramid are relevant to most students on their path to degree completion, but this study considered only low-income students and cannot be used to generalize to other groups of students. Although there was support for all the areas of the pyramid as having importance in affecting persistence, not all the sub-areas under each heading based on previous research

was articulated in this particular study. For example, first-year seminars have had at least

some empirical support for increasing retention (Kuh et al., 2007), if not persistence, so

seminars for first-year students may still be vital, but it was not indicated by this group of

low-income students as having a particularly strong impact on their persistence as they

reflected back on their college years at the point of graduation.

Finally, the students were recalling their experiences over a four-year period. It is

plausible that certain experiences that had an impact on their persistence at the time that

they occurred, either positively or negatively, were not recalled at the time of the

interview and thus, were not discovered in this study. These limitations can be lessened

over time as students, institutions, and researchers test the implications from this study

pragmatically, qualitatively, and quantitatively.

Future Research

This study reinforced previous research findings in some areas of importance for

the persistence of low-income college students, and suggests several areas that are

potentially fruitful for further exploration. The pervasiveness of friends being cited as

absolutely essential to the persistence of low-income students needs further exploration.

This factor has not been as strongly noted by previous research in quite the same why that

it appeared here. Social integration has been noted extensively, but not articulated in the

way that these low-income students depended on close friends to fulfill various roles in

their social and academic experiencing, providing both emotional and academic support.

Further research is needed to explore whether this is a key for a broader set of low-

income students and whether this applies to all students or is uniquely important for low-

income students who may be less likely to receive such support from their families. If support from close friends aids persistence for all students, does it have a different magnitude of effect for low-income students versus all students?

One of the strongest themes that emerged was the positive effect that serving as mentor or tutor had on persistence for these low-income students. Thus, more rigorous studies, both quantitative and qualitative, that explore low-income students serving in the role of mentor or tutor, could elicit better information on how this affects persistence and to what degree. This factor should also be examined to see if this effect only applied to low-income students or if it is equally effective for all students. My sense is that the change in sense of agency that occurs in this role-reversal may be particularly beneficial to the persistence of low-income students, but that hypothesis would need to be tested.

To the extent that other researchers would find the Persistence Pyramid a useful model for exploring issues of persistence, I would welcome further examination to determine which areas are most salient and whether the campus factor of a Caring Culture, which had the least amount of support, should be reformulated or removed. The continuum among support for diversity, support for community, and the presence of a caring culture demonstrates how closely intertwined these concepts are. Perhaps diversity should be its own category and support for community should be merged with the concept of a caring culture. While I strongly assert that support for diversity is helpful for all students and provides tremendous educational benefits, from the perspective of many White college undergraduates, it does not emerge as essential in their day-to-day experience, especially at PWIs. Thus, I wonder if changing the model for diversity to be a

stand-alone category would still apply equally well to all students. As noted earlier, this research on persistence, especially for low-income students, could be enhanced if other researchers engaged in this iterative process of testing various elements of the Persistence Pyramid with qualitative and quantitative methods. Institutions could also test various implications by attempting to implement some of the pragmatic solutions implied by this study.

One final area for future research could explore the deeper reasons why these low-income students were successful. This study illuminated a variety of factors that helped these low-income students succeed and overcome challenges. However, why were they able to take advantage of resources and opportunities when other low-income students were not able to do so? Is it simply that these students were able to find ways to utilize these resources when other students were not or that these resources were not available to other low-income students? Or did other low-income students use the resources but not derive as much benefit from them? Can research related to positive psychology and strengths-based initiatives explain the difference between this group of low-income students and other groups of low-income students who are less successful academically?

Conclusion

This study interviewed 21 Fall 2008 full-time first-year Pell Grant recipients in May 2012 when 20 of the 21 were at or near the point of degree completion. The study employed the Persistence Pyramid, the conceptual model that I created, as a lens to ascertain which factors have the greatest impact on persistence from the perspective of

successful low-income students. The Persistence Pyramid was a useful framework to group the factors of persistence into unifying categories and to illuminate the various themes which were most salient based on the experience of these low-income students. The study also illustrated how various factors interacted with each other to enhance persistence, hinder persistence, or mute negative risk factors.

Not surprising, the persistence factors related to the umbrella theme of economic were the most prevalent and had the greatest effect, potentially negative, on students' persistence. These economic factors also interacted the most with other persistence factors, often preventing the full utilization of persistence enhancers that a student otherwise could have employed to their advantage. The other seven factor areas were relevant and all had particular themes of persistence that illustrated factors that helped or hindered persistence for these low-income students. Two particular themes emerged as especially helpful in students' ability to persist. Under the social umbrella, having friends and relying on them for emotional support as well as academic assistance was especially useful for these students. Under the involvement umbrella, over three-fourths of students served as a mentor or tutor and most of these students indicated that this experience was one of the most useful in improving their ability to persist to degree completion.

This study provided a useful contribution to the scholarship of persistence research, especially as it applies to low-income college students. The Persistence Pyramid is a useful conceptual model that could be employed in future research. This study illuminated the various ways that economic factors have a substantial impact on almost all the other factors that affect persistence. This study also demonstrates how various

factors of persistence can interact with each other to either enhance or hinder persistence. This study also uncovered two extremely helpful factors of persistence, the role of friends and students serving as a mentor or tutor, that have not been previously acknowledged to have such a substantial impact on persistence. Although some research exists in both areas, more research is needed on both of these factors to determine their role in encouraging persistence.

Income inequality continues to grow in the United States and earning a baccalaureate degree is one of the most effective ways to break a cycle of poverty. Thus, this country and higher education institutions need to address the baccalaureate degree attainment gap between low-income and high-income students that has either remained constant or grown at most institutions over the past several decades. This study illuminates various high impact factors on the persistence of low-income students and reinforces which factors from previous literature are particularly relevant to low-income students. With an appreciation of how these factors interact with each other, this study suggests numerous implications that various stakeholders, including policymakers, institutional administrators, student-service personnel, parents, and students, can effect to improve the persistence and baccalaureate graduation rates for low-income students. Without embarking on such endeavors, the overall outcome appears grim for the United States' goal of producing an adequate number of four-year college graduates and for low-income students attempting to escape poverty through a college education. Unless we collectively do better, class mobility will remain a largely illusory goal that only a very small percentage will achieve.

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Appendix A

Recruitment e-mail sent to potential participants

Dear University Student:
Congratulations on getting close to graduation and earning your degree. Would you like to participate in a research study where your college experience may help inform future students about ways to be successful? Plus, you will earn a $50 Target gift card for your participation.

My name is Les Opatz. I am a Doctoral Candidate in the Department of Organizational Leadership, Policy, and Development. I am conducting my doctoral dissertation research on graduation rates for students who receive Pell grants. Based on your experience as a successful student, I want to find out what helped and what got in your way on your path toward graduation.

If you agree to participate, I will conduct one 60-90 minute interview with you that will be audio-recorded. After the interview, I will e-mail you a transcript of the interview and ask that you verify its accuracy and then you will receive your $50 gift card. All of your responses and information will be kept strictly confidential and you will not be identified or identifiable in the dissertation or any subsequent reports.
Your participation could be informative for future students and higher education institutions. If you are interested in participating, please e-mail me at opatz001@umn.edu and I will send you additional information.

This email was sent to you by the Office of Institutional Research on behalf of Les Opatz. No information about you has been released to Mr. Opatz. If you choose not to participate, please disregard this email and there will be no further contacts.

Appendix B

CONSENT FORM

Pyramid of Persistence: A Qualitative Exploration of Persistence for Pell Grant Students

You are invited to be in a research study of graduation rates for students who receive Pell grants. You were selected as a possible participant because you started at the University of Midwest, in Fall 2008, have received a Pell grant, and have completed at least 90 credits. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Les Opatz, Department of Organizational Leadership, Policy, and Development at the University of Minnesota.

Background Information

The purpose of this study is to identify what helps and what hinders students to be successful in college and progress toward graduation from the perspective of students who received Pell grants and are nearing graduation.

Procedures:

If you agree to be in this study, I would ask you to do the following things: Participate in a digitally audio-recorded interview of 60-90 minutes in length that will ask you about your experience in college. Answer a few short-answer questions prior to the interview. A week or so after the interview, you will be e-mailed a transcript of the interview. I ask that you verify the transcription for accuracy and meaning. Recordings of the interview will be erased after they have been transcribed.

Risks and Benefits of being in the Study

There are no known risks from participating in this study and any risk should be very minimal, since it simply requires reflecting back on your academic and co-curricular experiences in college. There are no direct benefits to participation, but you will contribute to an improved understanding of the college experience for Pell grant recipients and may help to improve the graduation rates for future students.

Compensation:

You will receive a $50 Target gift card as compensation for your time in participating in the study. You will receive the gift card after you verify the transcript of your interview.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. All participants will be identified with a pseudonym and all identifying information will be removed. Research records will be stored securely and only researchers will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality. Only Les Opatz will have access to the digital audio recordings and they will be destroyed after transcribed. The transcripts will be destroyed three years after the completion of the study. These transcripts will be used for educational and research purposes only.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Midwest. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Les Opatz. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at the University of Minnesota, 19 Johnston Hall, 101 Pleasant St. SE, Minneapolis MN 55455, 612-624-4139, opatz001@umn.edu. You may also contact his dissertation adviser, Dr. Darwin Hendel, 330 Wulling Hall, 86 Pleasant St SE. Minneapolis, MN, 55455, 612-625-0129, hende001@umn.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

The University of Minnesota's Institutional Review Board (IRB) Human Subjects Committee has assigned the following study number to this research: **Study Number:** 1203E12104

You will be given a copy of this information to keep for your records.

Appendix C

E-mail with additional information and initial questions

Thank you for your interest in participating in my research study on graduation rates and the college experience for students who receive Pell Grants. I would like to schedule a 60-90 minute interview with you, during which I will be asking a variety of questions about your experiences with classes, faculty, activities, financial aid, etc. All information shared will be kept strictly confidential and you will not be identified or identifiable in the written dissertation or any other materials. Some practice interviews were around 55 minutes, but I want to allow for 90 minutes to ensure you have enough time to talk about your time in college.

All interviews will be conducted on campus. Listed below are some dates and times that I will be conducting interviews. Please give me a few specific dates and times that would work for you and I will get back to you quickly with which spot I have you scheduled for. I will be adding some times during Finals week if none of these times work for you.
In 1-2 weeks after the interview, I will e-mail you with a transcript of the interview. I ask that you read it to verify that what is written is accurate and if you have anything to add or clarify to any of the statements you made. Once you have done that, your participation is complete and you will receive your $50 Target gift card.

Attached is the consent form. You do NOT need to sign it. It is simply for your information and I will give you a printed copy of it when you come for your interview. If you could please also answer the following questions and send it to me via e-mail prior to the interview, then I won't need to collect that demographic information from you at the time of the interview.
Current college of enrollment at U of M:
Major(s):
Minor(s):
Completed credits after Fall 2011:
Anticipated term of graduation:
Gender:
Race/ethnicity:
Do you have one parent (or more) that has earned a bachelor's degree?
If you remember, what was your composite ACT/SAT score?
If you remember, what was your approximate high school rank/percentile?
If you remember, what was your high school GPA?

Thank you for helping out with this valuable research,
Les

Appendix D

Numerical Distribution of Quotes from Each Student

Student	Quotes
Adrian	22
Carrie	15
Devi	17
Earl	15
Fiona	7
Gloria	27
Hank	32
Jacques	21
Jenny	24
Lee-Lee	18
Leah	27
Makeda	28
Patrice	17
Reese	22
Saulo	27
Serena	30
Sheldon	25
Suresh	20
Tariq	15
Yasir	18
Yvette	33

Appendix E

Interview Protocol

Semi-Structured Questions

Beginning general questions about their persistence experience:

I began each interview by explaining the study and started with some basic questions meant to have students provide me with their general opinions about what has helped them be successful and what has gotten in the way. To minimize the power of suggestion, I asked general questions first and then followed with sets of questions that target specific areas based on the literature.

Considering your overall college and academic experience, what has been the greatest contributing factor to your success as a student here?

If you were ever contemplating a break from college for a semester or more, what obstacles were you facing at the time and how did you overcome them?

All of the remaining questions relate to some area that has suggested saliency based on the literature and the Persistence Pyramid structure.

Questions related to academics:

Tell me about the classes in which you were most successful and why?

Tell me about any classes that you struggled with academically and what you did to address the challenges you were facing in those courses?

When and how did you decide on a major?

If you were ever pursuing other majors, please list them and the reasons for changing from them

Questions related to economics:

Tell me your thoughts on the cost of college attendance and the ways that your financial situation affects your schooling?

Do you have college expenses that are not covered by financial aid?

If you have taken out loans, approximately how much will you have borrowed by the time you graduate?

Do you work while in school? If so, where and how many hours per week?

Tell me about family members or others who assist you with navigating the complexities of college or the educational system?

Questions related to social factors:

How would you describe your experience with most of your classmates and other students on campus?

How would you describe your interactions with faculty and staff on campus?

Tell me about any mentors or other people supporting your efforts to graduate?

Have you ever felt disconnected or isolated from the rest of campus? If so, what did you do to address those feelings?

Questions related to psychological factors:

What are your primary reasons for attending college and earning a four-year degree?

What is your motivation to stay enrolled and graduate?

In what ways is your family supportive and/or not supportive of you in the pursuit of your goal of college graduation?

What are your post-graduation plans? Tell me about a career path that you have in mind.

Questions related to educational and curricular support:

Tell me about your experience with academic advising, career services, or related support services?

Please list any living/learning communities in which you participated as well as your participation in MCAE, TRiO, MEP, summer bridge, or other programs.

Questions related to support for diversity and community:

Tell me about your experience with diversity on campus and to what extent you believe we have a campus environment that does or does not support diversity?

Based on your personal self-identification, in what ways do you feel this campus was welcoming and supportive (or not) to you and what could have been done to be more supportive?

Please describe any campus communities and outside communities of which you feel like you are a member?

Describe the ways that you feel that you are a [Muskie] or otherwise a member of the campus community?

Questions related to involvement:

Tell me about your participation in any campus student groups or other ways you have been involved on campus?

Tell me about your participation in or attendance at sports, arts events, or campus speakers?

Questions related to a caring culture:

In what ways have you encountered caring and uncaring individuals, environments, or systems on this campus?

Can you identify one or more people on campus who you believe have supported you in your educational endeavors and your attempts to move toward graduation? Explain what they did and how they did it.

Overall wrap-up questions:

Considering all the things we talked about, what do you think has contributed most to being successful in school and persisting?

What do you think this institution could do, to help students remain enrolled and graduate?

What do you think students can do to ensure that they remain enrolled and graduate?

How has your particular financial situation affected your experiences and choices as an undergraduate on this campus?

Any final comments or thoughts you would like to share?

Appendix F

IRB Exemption

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

Study Number: 1203E12104

Principal Investigator: Les Opatz

Title(s):
Pyramid of Persistence: A Qualitative Exploration of Persistence for Pell Grant Students

This e-mail confirmation is your official University of Minnesota RSPP notification of exemption from full committee review. You will not receive a hard copy or letter.

This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.
You may go to the View Completed section of eResearch Central at
http://eresearch.umn.edu/ to view further details on your study.

The IRB wishes you success with this research.