

THE STUDENT EXPERIENCE: THE EFFECT OF THREE COLLEGE RETENTION
PRACTICES ON FIRST-GENERATION SUCCESS OUTCOMES

by

Erica Woods-Warrior

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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March, 2014

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ABSTRACT

Despite the growing importance of post-secondary degree attainment, existing research indicates that first-generation students (FGS) at 4-year colleges and universities are twice as likely as their peers to drop-out of school before their second year of study, and a great proportion of these students never return to complete their undergraduate degree. The present study collected and analyzed institutional data to determine the impact of three programmatic strategies on student retention and academic outcomes for FGS. The strategies are: lower/upper-level student integration, faculty mentorship, peer mentorship, and Communities of Learning (CoL). Each was investigated in the context of a student retention program at a historically Black College and university (HBCU) using multivariate analysis. The sample used for this study was 75 first-year, full-time FGS currently enrolled in the retention program at a private, 4-year institution. The results indicate that of the three retention strategies studied, faculty mentorship and students' participation in CoL activities most greatly impact their engagement. Additionally findings suggest that while none of the three strategies are direct correlates to retention, all three may act as mediators to improve engagement, which has been historically linked to retention.

Descriptors: first-generation, student retention, higher education, Community of Learning, mentorship, persistence, stop-out

DEDICATION

This work is dedicated to God who reminds me daily to “be not moved” by adversity, my angels, Jaylen and Anaya, my family and personal heroes who motivate me to press forward, and the students who have inspired my lifelong learning process. “E la minaccia degli anni trova e mi faccio trovare paura”.

ACKNOWLEDGEMENTS

Since beginning this journey, I have received support and encouragement from a great number of individuals including family, friends and colleagues. I would like to thank my mother Arnita Woods and my aunts Althea Royal and Veronica Harrelson for demonstrating for me the unyielding ability to display grace under fire and pushing me to believe that all things are possible. Jessica Scott has been a colleague and friend. During data collection and writing, she encouraged me through countless hours of revisions, read many editions of the manuscript, and helped as I balanced my professional responsibilities and my academic goals.

I am also grateful to my dissertation committee which consisted of Dr. Patsy Anderson-Rusmisl, Dr. John Duryea, and research consultant Dr. Scott Watson. Dr. Mary Garzon, the chair of the committee, has exceeded my greatest expectations. Her guidance, prayer and faith have made this a rewarding process as I moved from an impassioned idea to a completed study. In addition, Mark Ledbetter provided valuable statistical advice.

I would like to thank the students who took part in this study for generously sharing their time and experiences. I have learned much through your paradigms. Finally, thank you to Berhanu Mengistu who introduced me to the importance of beginning the process in spite of all odds.

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List of Abbreviations

Community of Learning	CoL
Continuing-Generation Students	CGS
First-Generation Students	FGS
Historically Black Colleges and Universities	HBCU
Minority-Serving Institutions	MSI

CHAPTER ONE: INTRODUCTION

Background

The importance of attaining a post-secondary degree in the United States has soared to historic heights, as the competitive global market has shifted to demand a highly trained, specialized workforce. In President Barack Obama's first joint address to Congress in 2009, he established a national goal to regain the highest proportion of college graduates in the world by the year 2020 (The White House, 2009). To reach this goal, the U.S. Department of Education has projected that the proportion of college graduates in the United States must increase by 50% nationwide by the end of the decade (The White House, 2011).

In the midst of national economic decline, the gradual closure of the gap between socioeconomic classes and racial groups maybe aided by a renewed examination of the institution of higher education. In a 2006 article titled "Black Student College Graduation Rates Remain Low, but Modest Progress Begins to Show," the *Journal on Blacks in Higher Education* (JBHE) reported that the college graduation rate among Black men has increased by one percentage point every year since 2000. During the 1999–2000 academic year, 34% of all Latina/Hispanic and 40% of all Black students were enrolled in 4-year colleges, as opposed to 46% of all White students (Lotkowski, Robbins, & Noeth, 2004). This began the trend of moderate progress. However, currently, White students still represent 72% of enrollees at all 4-year colleges nationally, whereas Black students represent 11% and Latina/Hispanic students represented 6% of enrollees nationally (Melendez & Melendez, 2010).

Across races and ethnic groups, there are notable correlations among socioeconomic status, race, and whether a student is the first in his/her family to attend or complete college. Further, there are vast disparities in the completion, success, and retention of students whose

parents have attended college without completion and those whose parents have had no college experience (Adelman, 2006). There are a multitude of explanations for the disparities between first-generation students (FGS) and continuing-generation students (CGS). FGS report gaps in four key areas: (a) knowledge about the college experience, (b) familial support, (c) expectations about college, and (d) academic preparation for college (Pascarella, Pierson, Wolniak, & Terenzini, 2004).

Historically Black colleges and universities (HBCUs) serve more than 300,000 students annually, and more than 60% of these students are the first in their families to attend college (Taylor, 2010). In February 2011, President Obama signed a new executive order, reauthorizing the White House Initiative on HBCUs, under the direction of John Wilson. Congress also passed the President's historic Health Care and Education Reconciliation Act, which appropriated more than \$40 billion in Pell grants for eligible students, many of whom are enrolled at HBCUs. The majority of these Pell-eligible students are from low-income minority households. Additionally, the White House projected that nearly 60,000 additional Pell Grant awards will go to African-American students and 21,000 of those Pell grants will go to students at HBCUs (U.S. Department of Education, 2010).

According to the National Center of Education Statistics (NCES, 2007), approximately one-fifth of institutions serving low-income students are HBCUs, compared with less than 1% of other institutions. On average, low-income serving institutions also tend to have fewer full-time equivalent undergraduate students than other institutions, as well. According to the most recent NCES data, Black students were most prevalent in undergraduate institutions with large low-income enrollments, where they made up 50% of freshmen in *very selective institutions* and 35% in *minimally selective institutions*. These two groups of institutions encompass many of the

HBCUs that exist (NCES, 2007). Thus, low-income students and the universities that serve them have a uniquely vested interest in student retention and graduation.

Statement of the Problem

These findings have been confirmed by research completed by the NCES, an organization that conducts longitudinal studies of U.S. college students. The NCES data from the 2010 report on the college performance of 1,301 institutions showed that high school academic preparation and measures of socioeconomic status (such as family income and parents' education) are highly predictive of degree attainment (Adelman, 2006). Using the Graduation Rate Survey (GRS), which is part of the Integrated Postsecondary Education Data System (IPEDS) collected by the U.S. Department of Education, the NCES also concluded that in nearly all comparison groups, the graduation rate for Blacks was substantially lower than that for Whites and Hispanics. Notably, the gap in graduation rates between White and Black students and between White and Hispanic students, on the other hand, typically narrowed as the size of the low-income institutional population increased. Current research (Bozick, 2007; Grayson, 1997; Ishitani, 2009) suggests these variables produce a combination of individual and familial characteristics that reduce the likelihood of college completion for FGS, but there is limited literature that identifies successful strategies for reversing this phenomenon. The problem is there is no consensus on which practices are most effective in increasing persistence among FGS, particularly those from racial and ethnic minority groups. Because scholarly evidence strongly suggests that attrition is heaviest at the end of the freshman year (Diehl, 2012; Filkins, 2002; Rootman, 1972), it is important to investigate the variables that may be correlated with increased retention, engagement, and graduation for FGS. While pre-enrollment programs have been the primary focus of past research, programs that begin in the first year of study and

continue into the subsequent years of study provide a prime opportunity to evaluate the effectiveness of retention practices. This is particularly helpful because little is currently known about the college experiences of this population (Pascarella et al., 2004).

Early data from the National Center for Education Statistics (NCES) revealed that FGS were more likely than their CGS counterparts to have lower incomes, to be enrolled as part-time postsecondary students, and to report financial aid as instrumental to their education decisions (Dowd, 2006; JAAL, 1998). Consistent with the traditional FGS described in traditional literature (Terenzini, 1996), most FGS at HBCUs today exhibit lower rates of persistence, retention, and graduation. Currently, institutions serve these students through a plethora of programs; among them are pre-college and Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) efforts, academic support centers, and academic counseling programs. Additionally, the federally funded TRIO programs are used to provide instruction in literature, math, writing, science, and study skills to college students and college-bound high school students to ease their transition. TRIO consists of Upward Bound, Talent Search, and Student Support Services, initiatives that have increased the retention and graduation rates of eligible enrolled students through a comprehensive set of academic services (Gullat & Jan, 2003; Noel-Levitz, 2011). Many institutions also maintain offices that focus on “freshman studies,” wherein the major objective is to provide academic support to first-year students to facilitate academic achievement. Additionally, entering freshman and transfer students are typically required to participate in an orientation course designed to improve the quality of the first academic year. Students whose cumulative grade point averages fall below 2.00, for example, are often required to take a “Learning to Learn” course, designed to enhance students’ skills in generating questions, reading comprehension, scheduling course work, developing

strategies for studying for examinations, writing to answer questions, and writing term papers.

Yet, it is still unclear whether these programs are meeting the specific needs of FGS (since FGS are not the sole target group) and whether there are enough of these programs in existence.

Historically, these programs have operated as separate programs on individual campuses; however, there has been a recent shift to the use of holistic retention initiatives to bridge the gaps that exist in providing necessary services to at-risk students (Noel-Levitz, 2011). Little research has been conducted to assess the effectiveness of either the programs or their specific components in increasing student retention and graduation. Nonetheless, as the college enrollment of FGS increases, so does the need to better understand the strategies that promote successful transitions to (and through) college. This research provides insight on various strategies related to improving the trajectory of success for this vulnerable population.

Purpose of the Study

The purpose of the study was to provide a context in which to better understand the role of specific student retention strategies in the first-year experiences of FGS at HBCUs. Specifically, the study focused on three key retention practices regarded by field experts as essential to college success (Rose, 2005; Fischer, 2007): lower/upper-level student integration used in Communities of Learning (CoL), faculty mentorship, and peer mentorship. This research sought to identify the effect of these three retention practices and the first-to-second-year retention of FGS. This research examined a 2-year academic program developed to improve first-to-second year retention for first-generation minority college students. The work addresses two goals: (a) to understand conceptual bases on which academic retention strategies for at-risk students are developed, and (b) to isolate components that are effective in improving academic and extracurricular success outcomes for these students. This research examined the program

and its components to discover the extent to which such practices impact the trajectory of academic achievement and retention for the first-generation participants.

This study contributes to the research knowledge base by drawing inferences about the relative impact of the three practices on student retention rates and academic performance and, thus, aids individual academic institutions, education policymakers, and educators. Additionally, findings will also inform secondary school programs that seek to better prepare college-bound students for a successful transition into college. The research focuses on college freshmen and sophomores because studies indicate that undergraduate minority students are at the highest risk of attrition during their first year of study (Diehl, 2012; Hayek & Kuh, 2004; Kuh, 2007; Pike, 2005; Salinitri, 2005). The institutions under study currently participate in the U.S. Department of Education Data Set and The College Board data pool. Research findings are vital for both these datasets as well as for the National Survey of Student Engagement.

Pike and Kuh (2006) reasoned that when there is no critical mass of Blacks and/or students of color on campus, such as at a predominantly white institution (PWI), Black students' social networks are usually compromised and the challenges compounded. The absence of this critical mass deficit posits the HBCU as an ideal setting to assess the impact of these variables against a backdrop of racially homogeneous support networks.

Significance of the Study

A generation ago the United States had the highest college graduation rate in the world. Today it ranks 12th among 36 developed nations in the percentage of young adults with college degrees (Lewin, 2010). In the midst of one of the worst economic crises in 50 years, the federal government has begun to prioritize postsecondary education as a means of developing the best-educated and most competitive workforce in the world. In the wake of this era's emerging

knowledge-based economy, college retention and completion has, again, gained a place on the national agenda. President Obama has set an ambitious goal for the nation: the attainment of the highest proportion of college graduates in the world by 2020.

In order to regain this international position as the leader in education, approximately 60% of Americans will have to earn college degrees by 2020. Yet, according to the American Council on Education, at the turn of the century only 40% of eligible Black students went to college, with only 46% of those attendees graduating within 6 years (Astin & Oseguera, 2005; Grier-Reed, Madyun, & Buckley, 2008). As incubators for a large proportion of African American college graduates, the nation's 105 HBCUs will play a critical role in meeting this challenge. Indeed, the public narrative on HBCUs is being revised to include discourse on the infrastructure, capacity-building, and ability of these institutions to change the national statistics on college retention and graduation. These institutions, which include public and private, 2-year and 4-year institutions, medical schools, and community colleges, are a cohort of more than 120 minority serving institutions (MSIs) currently comprised of over 80% ethnic and racial minorities. Inherent correlations between socioeconomic status and race and a disproportionate number of racial minorities who make up the national population of FGS contribute to the fact that these institutions also serve large populations of FGS. Increasingly, these institutions have begun to prioritize the success of FGS and to seek programmatic methods to improve retention and graduation rates among this population. Scholars conclude that as an overrepresented population of FGS, Black college students tend to experience the college process in the context of major stressors. Financial concerns, lack of knowledge about the college process, social isolation, institutional racism, perceived cultural differences, and family and economic problems have been cited as primary obstacles to the collegiate experience for these students (Arnold,

1993; D'Augelli & Hersberger, 1993; Lazarus, 2000). Johnson, Gans, Kerr, and Deegan (2008) suggested that family cohesion also correlates with student-perceived stress and depression, lending credence to the notion that student adjustment may be compromised for many FGS making the transition from high school to college. Scholars agree that these stressors often include parents who do not understand the time pressures of higher education, the need to mitigate the interference of college activities with family obligations, and the family relationships that frequently change as a result of a student's transition to college (Lazarus, 2000; McCarron, 2006; Melendez & Melendez, 2010). In fact, in their study of FGS, McCarron, Pagliarulo, Inkelas, and Kurotsuchi (2006) found a positive relationship between parental involvement and educational aspirations. Melendez and Melendez (2010) challenged previous notions of autonomy and independence that were considered imperative aspects of student persistence and retention in earlier theories (Tinto, 1975, 2006). Researchers contend that secure parental attachment is positively correlated with college adjustment (Larose & Boivin, 1998; Mattanah, Hancock, & Brand, 2004; Rice, Fitzgerald, Whaley, & Gibbs, 1995) and may be differentially associated with each racial subgroup (Melendez & Melendez, 2010).

In spite of these hurdles, however, evidence suggests that an absence of positive predictors or a presence of negative predictors does not wholly determine a student's fate. Many of the challenges of integration into the college environment (Herzog, 2008; Melendez & Melendez, 2010; Pascarella & Terenzini, 2005), including detachment from family, may necessitate new adaptation tools (Gloria, Castellanos, Lopez, & Rosales, 2005). Providing assistance to help students to develop emotional coping skills may buffer negative effects. In their 2008 study on emotional coping and collegiate adjustment, Johnson et al. (2008) found that family environment did not make a significant or unique contribution to explaining variance in

college adjustment once participants' emotional coping was included in the analyses. Such coping skills may be gained with the assistance of college faculty, peers, and support services. Johnson et al. found that the early inclusion of instruction on managing emotions may be helpful in facilitating social adjustment to college, which has been implicated as one predictor of college retention and mental health among emerging adults (Gerdes & Mallinckrodt, 1994; Mounts et al., 2006). In a contemporary study of retention programs in American colleges and universities, Myers (2003) reported similar findings. One of the programs she analyzed reported a 90% retention rate for African American students, while other programs in the study boasted 7-14% increases in retention over a 6-year span. Myers asserted that the common thread among these programs was the holistic attention given by faculty mentors and facilitators to the cognitive and emotional needs of the students. Williams and Hellman (2004) concurred, suggesting that adults act as a social force that aids students in the development of self-regulation, goal-setting, and self-monitoring, as well.

These skills increase students' self-efficacy and moderate the effects of stressors. In their study of stress and efficacy in first-year students, Zajacova, Lynch, and Espenshade (2005) found that academic self-efficacy is a more robust and consistent predictor of success than stress, in spite of the marginal role stress may play in predicting decisions about subsequent enrollment. The "implicit expectations" and "tacit understandings" (Collier & Morgan, 2008) that are necessary to navigate the college environment are often absent in the cognition of a student whose parents have not had the collegiate experience. Collier and Morgan argued that variances in cultural capital based on parents' educational experiences correspond to differences in the mastery of the student's role and students' ability to respond to faculty expectations. They contended that CGS are better able to adjust their behaviors to differing expectations of

professors, which is a critical skill used in the transition to college. Terenzini and Rendon (1994) suggested that interpersonal rather than academic issues are the most threatening disjunction for college students. In fact, in their qualitative study of college freshmen, they found emergent themes of students' concerns over starting friendships, feeling connected to their institution, learning to validate experiences, and determining whether pre-college friends should be considered assets or liabilities.

In general, "campuses have lacked a cohesive and valid systematic definition of, or standards for, first-year excellence that go beyond a single program to a broader characterization of a holistic approach to the first year," (Barefoot, 2004). Thus, research is needed to inform new approaches to increasing retention, persistence, and first-year experiences of first-generation and continuing students. Valid models are needed against which institutional retention efforts may be measured. This study provides such a model and positions three specific strategies at the center of the pedagogical discourse on the first-year experience.

The Program for the Retention and Enrichment of Successful Students (PRESS) was developed by faculty at Hilman University to increase academic preparation, confidence, and success of first-generation college students. In the context of faculty-driven learning communities, this academic-focused program aims to foster student development and build skills in critical thinking, creative writing, and time management through classroom-based strategies. Two core courses were developed to integrate first-year FGS with existing matriculating students. The courses serve to increase students' ability to synthesize interdisciplinary information and increase the amount of engagement between new and existing students. Academic advising efforts and academic skill-building are enhanced by the presence of the program's retention specialist and through monthly workshops and assessment activities.

PRESS also incorporates peer and faculty-oriented mentorship, using upper-level FGS and faculty volunteers.

Because scholarly evidence strongly suggests that attrition is heaviest at the end of the freshman year (Eckland, 1964; Iffert, 1958; Marsh, 1966; Pike & Kuh, 2005; Rootman, 1972), the first stage of the program serves FGS in their first year of academic coursework. The retention activities begin at the point at which the student is admitted to the institution. Students desiring to participate in retention activities complete the participant interest application, which includes an income determination section (student and parents) and two letters of recommendation. Although grade point average and SAT scores represent a part of the application process, these data are not the primary determination of acceptance. First-year students admitted to the program are assigned a faculty advisor during the summer prior to their first academic semester. This advisor is responsible for their academic counseling needs throughout their matriculation at the University. Additionally, students are introduced to the program and given a summer reading assignment to be completed prior to the beginning of the academic semester.

Using a CoL model to engage students in active learning, this stage includes the implementation of a faculty-taught integrated curriculum that includes two paired courses: (a) a three-credit course in critical thinking and writing and (b) a three-credit history/reading integration course.¹ The CoL meets as two large cluster classes; faculty work together collaboratively in the classroom, consistently modeling learning for students (Terenzini, 1980; Tinto, 1980) while encouraging student participation using seminars, class discussion, group

¹ Pascarella et al. (2004) suggested that the number of courses taken in the arts and humanities had significantly stronger, positive effects on writing skills, educational plans, and internal locus of attribution for academic success for first-generation students.

projects, and a service learning/civic engagement component. The participant cohort must enroll in both courses simultaneously, and faculty use linked content and techniques to draw connections between textual information and classroom discussions. To enhance cocurricular emphasis (Levine, 1999), study skills and information synthesis are reinforced through faculty-supervised student work groups. Project participants participate in all retention activities planned by the project faculty and coordinated by the faculty retention specialist /academic counselor, including monthly group meetings focused on academic success strategies. Peer mentors work alongside faculty mentors and are matched to participants according to each student's major and/or area of difficulty. Participants and mentors will engage in shared academic events with peers and alumni on a monthly basis.

A number of researchers concurred that higher levels of contact with peers and faculty correlate with higher levels of learning gain over 4 years in higher education (Astin, 1993; Endo & Harpel, 1982; Pascarella & Terenzini, 1991; Pike & Kuh, 2005). Terenzini (1980) also emphasized that informal contacts to discuss career concerns or perceptions of degree of faculty concern function in a compensatory manner (for teachers and students) in terms of their influence on freshman persistence. PRESS facilitates this engagement through the use of CoL full-time faculty who serve as both academic advisors and mentors for participants. This suggests an increased level of continuity, encouraging the formation of "interpersonal links with important adults in the institution which tend to compensate for the influence of an initially low commitment to the goal of graduation or the relative absence of parental role models" (Terenzini, 1980).

The second stage of the program continues services for FGS after they have transitioned to their *second* year of study and emphasizes activities that build upon their academic

momentum. Retention and persistence activities included in this stage include continued academic advisement and counseling, peer-to-peer tutoring, mentoring by faculty and peers, faculty-taught time management seminars, financial advisement, faculty-led academic field trips, graduate testing preparation classes, and monthly academic enrichment and networking sessions. The project participants enroll in the same courses as other students in their respective majors, and a minimum of 20 hours each month will be devoted directly to project activities. At the completion of stage 2, participants are awarded the opportunity to participate as mentors for the next cohort.

Research Questions and Hypotheses

To help fill the current research gap, this research examined an institutional program that has implemented three key retention strategies. The researcher hypothesized that these components would have a direct positive correlation with first-to- second year retention rates and student engagement scores for identified FGS. Additionally, hypothesized that full-time participation in the student retention program is positively correlated with the likelihood of FGS' continued enrollment from the first year of study to the second year of study.

This research was modeled on that of the 2011 National Survey of Student Engagement (NSSE) and was guided by the following questions:

1. What impact does the use of the classroom integration of first-year and matriculating students in Communities of Learning have on the first-to-second year retention of first-generation students?

Null Hypothesis 1, H_0 is: There is no statistically significant difference in the first-to-second year retention of first-generation students who have been integrated with upperclassmen

in Communities of Learning and those who have not, as shown by second-year institutional enrollment data.

2. What impact does the use of the classroom integration of first-year and matriculating students in Communities of Learning have on the first-to-second year level of engagement of first-generation students?

Null Hypothesis 2, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been integrated with upperclassmen in Communities of Learning and those who have not, as shown by the 19-item engagement survey.

3. Is there a difference in the first-to-second year retention of first-generation students who are formally mentored by faculty when compared with those who are not?

Null Hypothesis 3, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been integrated with upperclassmen in Communities of Learning and those who have not, as shown by the 19-item engagement survey.

4. Is there a difference in the level of engagement of first-generation students who are formally mentored by faculty when compared with those who are not?

Null hypothesis 4, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been formally mentored by faculty and those who have not, as shown by the 19-item engagement survey.

5. Is there a difference in the first-to-second year retention of first-generation students who are formally mentored by peers when compared with those who are not?

Null hypothesis 5, H_0 is: There is no statistically significant difference in the first-to-second year retention of first-generation students who have been formally mentored by peers and those who have not, as shown by second-year institutional enrollment data.

6. Is there a difference in the first-to-second year level of engagement of first-generation students who are formally mentored by peers when compared with those who are not?

Null hypothesis 6, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been formally mentored by peers and those who have not, as shown by the 19-item engagement survey.

Definitions

- *Communities of Learning (CoL)* are operationally defined as sets of linked or clustered courses enrolling a common cohort of students.
- *Faculty mentorship* is operationally defined as a set of formal activities in which a member of the institutional faculty is engaged with a student in academic and non-academic activities external to the classroom setting.
- *First-generation student* is operationally defined as a parent's educational status resulting in the lack of a college degree.
- *Lower/upper-level student integration* is operationally defined as classroom settings in which freshman students and sophomore, junior, and/or senior-level students coexist.
- *Peer mentorship* is operationally defined as a set of formal activities in which a continuously enrolled student is engaged with a student in academic and nonacademic activities external to the classroom setting.
- *First-to-second year retention* is operationally defined as a student's continuous enrollment from the first year of study to the second year of study, with the excepted lapse of the summer semester.
- *Student engagement* is operationally defined as a representation that is inclusive of "the effort, both in time and energy, students commit to educationally purposeful activities as

well as the institutional conditions that encourage students to engage in such practices” (Kuh, 2001) and measured by the score achieved on the Survey of Entering Student Engagement (SENSE).

CHAPTER TWO: LITERATURE REVIEW

More than 100 years of educational research has pointed to the distinct relationship between parental level of education and the academic success of college students. FGS at 4-year colleges and universities are twice as likely as their peers to leave before their second year (Pike & Kuh, 2005), and a great proportion never return to complete their undergraduate studies. This is so in spite of the fact that currently, the attainment of a baccalaureate degree represents the single most important educational attainment in terms of economic benefits (Pascarella & Terenzini, 1991). Indeed, to remain competitive in today's global marketplace, individuals must have skills and training that exceed those provided in high school. This is particularly vital for subsets of the population that have experienced disproportionate levels of poverty and unemployment. Despite the fact that the college graduation rate of Black men and women has increased, disparities still exist between FGS and CGS. Scholars suggest that low rates of retention and graduation for FGS populations can be attributed to a lack of fiscal and social capital (Pascarella et al., 2004) as well as to the level of attention given to these students on college campuses, the absence of sustained mentorship, and the fiscal constraints of student support services that specifically target the unique needs of FGS. These students, overwhelmingly low socioeconomic status African Americans ("Black Student College Graduation Rates," 2006), typically experience problems in adjusting to the college environment, maintaining a strong grade point average, and meeting the financial commitments of tuition and expenses. According to "Black Student College Graduation Rates" (2006), high drop-out rates are caused by inferior K-12 preparation, an absence of a family college tradition, and financial instability. Citing a Nellie Mae study, JBHE also reported in "Black Student College Graduation

Rates” that 69% of African Americans who enrolled in college but did not finish said that they left college because of high student loan debt. The U.S. Department of Education (2007) concurred, citing seven characteristics that increase a student’s risk of drop-out or failure that include delaying postsecondary enrollment, being financially independent of one’s parents, having dependents other than a spouse, attending college part-time, and working full-time (Horn & Premo, 2005). This combination of variables leads to a decrease in retention and to high stop-out and drop-out rates for these students.

A narrow base of literature related to first-year students exists, which primarily provides qualitative analyses of student and family experiences in their transition from high school to college by way of precollege programs. Most of this literature does not specifically focus on FGS as a distinct population. Of those studies that focus on FGS, the issues of retention and engagement are treated only anecdotally, as they emerge as by-products of the research. Additionally, institutional retention programs that specifically serve FGS are a relatively recent phenomenon; thus research on FGS has not typically included these programs.

The existing literature is clear in identifying differences between first-generation and second-generation college students. Compared to their peers, FGS tend to be at a distinct disadvantage in four critical areas. First, there is little basic knowledge about postsecondary education (e.g., costs and application process) among FGS and their families. Second, they experience a significantly lower level of family income and support. Third, there is generally a lower (or nonexistent) level of educational degree expectations and plans; and finally, FGS typically receive less academic preparation in high school (Pascarella et al., 2004). Findings from the Higher Education Research Institute and the U.S. Education Department (2001) concur, indicating that when these students enroll, they are less prepared and less confident, and exhibit

worse academic performance than their second-generation peers. According to Warburton, Bugarin, and Nunez (2001), nationally, there is a 15% gap between the 3-year persistence rates of FGS and students whose parents have attended college.

This literature review provides a synthesis of both qualitative and quantitative research that has been conducted using FGS and their first-year collegiate experiences as subjects. The leading theories on student persistence and retention are examined in the context of early and contemporary research. This examination is followed by a discussion of the five dominant themes of the research: methodological challenges, barriers to access to college and success in college, predicting drop-out and stop-out decisions, the role of faculty and peers in increasing student engagement, and the role of formal mentorship. Finally, a concise summary of the literature is provided to illustrate the current collection of available literature and to demonstrate the areas of deficiency that exist in that research.

Theoretical Framework

The theoretical perspectives dominating research on college retention were developed primarily between 1970 and 1980. Methodological assumptions in the existing literature on FGS include an emphasis on participant observation (Salinitri, 2005; Tinto, 1980) and the interpretation of patterns of student behavior within unique settings such as the HBCU. Underlying the majority of existing research is a postmodernist worldview that distinguishes between *what* students experience in the first year of study and *how* they experience college. Although the literature diverges on *the way* FGS experience the first year of college, scholars agree that FGS experiences diverge significantly from those of other students.

Astin's theory of involvement (1970, 1974) served as the first major work on college persistence and retention. Astin's work (1970, 1974, 1985), proposed that students succeed

because of a high level of involvement in collegiate activities. According to Astin's postulates of involvement, student involvement requires the investment of psychological and physical energy, and such involvement is a continuous, individualized concept. Further, Astin suggested that involvement has both quantitative and qualitative features and that the amount of learning or development that occurs is directly proportional to the quality and quantity of involvement. Finally, he articulated that the educational effectiveness of any policy or practice is related to its capacity to encourage student involvement (Terenzini, 1994). Astin's theoretical suppositions help to guide the present research, as they attribute student development to the pervasive effects of peer involvement on individual student development, academic performance, and retention. Astin contended that students relate learning and persistence to their involvement with peers, faculty, and co-curricular activities. Subsequent research (Grier-Reed et al., 2008; Lohfink & Paulsen, 2005; Terenzini, 1994) also supports Astin's initial claims that student retention and development are positively and directly correlated with involvement with faculty, peers, and peer groups.

Expanding upon Astin's development of this comprehensive theory of involvement, Tinto (1987, 1993) advanced the theory of student departure, the most commonly cited theory of student persistence. The model of student departure posits that most voluntary departures from college reflect a student's dissatisfaction with elements of the college experience, such as an ill fit between the student's goals and the institutional mission and integration issues. In this predictive model of institutional attrition, Tinto attributed a student's decision to persist at an institution of higher education to seven key variables: pre-entry attributes, the student's goals and commitments, academic and social institutional experiences, and academic and social integration. Unlike Astin's model, Tinto's differentiated between individual and institutional

variables. His findings suggest that the structure of the college or university greatly influences students in their emergent integration and in their persistence decisions.

Tinto's models of student persistence (1980) and student departure (1987, 1993) explain the integration of Communities of Learning (CoL) as key to bridging the academic-social divide and increasing student retention. These learning communities merge Astin's (1985) conceptualization of peer mentoring with institutionalized and individual efforts. CoLs use linked or clustered courses enrolling a common cohort of students to maintain a sense of consistency and cohesion among enrolled students. Tinto's theory also links this customized, linked classroom learning experience and student involvement to student effort and persistence. A growing body of literature confirms this link, indicating that there is a correlation between the quality of student effort and the extent of student learning (Kaufman & Creamer, 1991; Ory & Braskamp, 1988; Martinez, Sher, Krull, & Wood, 2009; Pace, 1984; Penrose, 2002).

A central figure in retention research, Tinto was instrumental in originating research that focused on mentorship as a predictor of success. His models of student persistence (1980) and student departure (1987) explain the importance of integrating CoL strategies and adult intervention in bridging the academic-social divide and increase student retention. Tinto's early work linked classroom learning experience and student involvement to both student efficacy and persistence. Tinto contended that students are more likely to persist in college when they successfully separate from their home context and become integrated into the college environment (Inkelas, Daver, Vogt, & Leonard, 2007). This transition is necessarily supported by a student's peer culture (Pascarella & Terenzini, 2005; Kuh, 1991; Braxton & McClendon, 2002). Tinto's model focuses on cocurricular involvement, faculty engagement, and peer interaction.

Taken collectively, the work of Astin and Tinto provide an ideal framework within which lower/upper-level student integration, formal faculty mentorship, formal peer mentorship, academic support services, and CoL may be explored.

Patrick Terenzini's (1996) model of college impact expanded these two theories to emphasize the relationship between the character of the student and the character of the institution in which the student is enrolled. Positing a causal sequence of persistence behavior and learning outcomes, this model asserts that precollege traits like demography and cognitive abilities, and affective variables such as expectations and orientations toward learning influence curricular choices and a student's curricular and extracurricular experiences. These two levels of persistence behavior in turn determine a student's learning outcomes. Additional theoretical considerations include the human capital theory, which has potential importance in describing intergenerational influences on the valuation of higher education (Paulsen, 2001), the choice-persistence nexus model (Paulsen, 2001), and Swail, Redd, and Perna's (2003) geometric model of persistence, which shifts the focus from individual behavior to institutional practices. Various models have been identified to provide a structural understanding of student attrition and persistence, including Bean's (1983, 1990) industrial model, St. John's (1992) financial impact model, and Paulsen and St. John's (1997) choice-persistence nexus model.

Theorists use human capital theory (Becker, 1993; Paulsen, 2001) to illustrate how these intergenerational influences impact a student's valuation of higher education. Some (Lohfink & Paulsen, 2005) even suggest that critical social theory best explains the determinants of FGS' persistence. This theory considers how social domination and exploitation are reproduced systemically to deny equal opportunities to attain higher education and other credentials. Rendón, Jalomo, and Nora (2004) also originated the concept of dual socialization, which posits

that institutions not only are responsible for academic integration but also collaborate in helping minority students to integrate socially and culturally when they attend college.

Review of the Literature

Methodological challenges. The most pressing concern surrounding the generation of research on FGS and their postsecondary experiences is that of definition. While some traditional research (Astin, 1973; Tinto, 1980) assumed a universal conceptualization of the term “first-generation student,” that misnomer quickly became a barrier to the clarity and precision of such research. More recent work has offered contending definitions that illustrate the complexity of the first-generation status.

Although some researchers have conceptualized the FGS as a student whose domiciliary parent(s) have received no postsecondary education (Choy, 2001; NSSE, 2009; Pascarella et al., 2004), others maintain that students may qualify as first-generation as long as neither parent has received a college or professional degree (Thayer, 2000). The former definition precludes students whose parents began but did not complete college, while the latter includes all parents who have not completed an official degree program. Ishitani (2006) tailored the broad definition by delineating students with parents “whose highest educational attainment was either a high school diploma or less” and “students with at least one of their parents having attended college but never attaining a bachelor’s degree” (p. 118). Conclusively, there no consensus on the definition of the term *first-generation*. Another discrepancy emerges when considering whether students completing 2-year programs, certificates of completion, and professional/vocational programs qualify as FGS under these definitions.

Following Tinto’s model, Pascarella and Terenzini (1980, 1990) suggested that regardless of definition, FGS must be compared only to other FGS when assessing their academic and

social experiences. The scholars also used this model to predict drop-out decisions made by FGS. However, some (Adelman, 2006; Penrose, 2002) criticized traditional retention models and measures like this one as anachronistic formulas incapable of accurately assessing student behavior and learning outcomes. Adelman (2006), who studied cohorts of high school students and their transition into college, even introduced to the traditional conceptualization of retention a distinction between retention (as a passive measure) and persistence (as an active measure).

Pascarella (2001) furthered the notion of FGS-specific research and used FGS self-reported gains in his later work to estimate college impact. Here, he explored self-reporting as an alternate strategy to draw conclusions about variables that impact FGS success and to expand the academically oriented variables used in earlier research. These findings provide the basis for the methodology used in the current study. The vast majority of existing studies of FGS focus on a distinct type of student: one who enrolls in a 4-year institution, lives on campus, and begins college during the semester immediately after high school (Inkelas et al., 2007). The current study includes students who do not necessarily fit this profile. This inclusion is due to the contention that FGS who may diverge from the traditional demographic and personal profile may respond to different strategies than those who institutions consider the traditional FGS.

Kuh (2003, 2007) identified major national datasets and examined the utility of such datasets in analyzing student behavior and outcomes. His work provided justification for additional research on the persistence and retention of FGS and began an assessment of the validity and reliability of methods historically used to study this population. McCormick, Pike, Kuh, and Chen (2009) advanced this methodological assessment by comparing the utility of the 2000 and 2005 Carnegie classification systems in research on students' college experiences and outcomes. In a meta-analysis of the validity of measures established to explore retention and

graduation data, they found that commonly used classification systems such as Carnegie are often inherently weak because they are not holistic in nature and do not include the multifaceted variables that comprise student experiences. McCormick et al. (2010), provided a more complete understanding of the relevance and flaws of measures typically used to understand retention trends.

The National Survey of Student Engagement. Researchers agree that the National Survey of Student Engagement (NSSE), a national dataset used to explore levels of student engagement in academic and nonacademic areas while enrolled, is a more useful tool for aggregating retention data. This dataset also provides essential statistical support for the significance of the current research. Scholars (McCormick, 2011; Kuh, 2008) agree that NSSE, at a minimum, offers impetus for discussions of collegiate quality, provides indicators of effective educational practice, and illustrates core activities related to desired student learning outcomes.

Emerging at the beginning of the 21st century, the NSSE was developed to add rigor to the national dialogue on student success. Prior to its use, public discourse on graduation and retention centered on high school preparation for college and the use of fiscal resources in higher education. The NSSE reframed the issue of student success, placing it in the context of the student experience. McCormick (2011) offered that the instrument, used at more than 2,200 colleges and universities, provides higher education administrators and faculty a set of “tools” that may be functional in the following ways:

1. It bridges the gap between higher education research and practice.
2. It is strongly focused on student and faculty *behavior*, as contrasted with satisfaction or other attitudes and beliefs.

3. It provides results that are comparable across institutions by using random samples and standard protocol for administration. Kuh (2007) also concurred with McCormick (2011) that NSSE is valid for use across race and ethnicity and across institutional type.

Concerns do exist about issues of validity surrounding the use survey research, such as the use of students' self-reporting about experiences across extended periods of time (Porter, 2011).

Additionally, some findings suggest that students of higher ability report academic measures such as grades and test scores more accurately than lower ability students (Cole & Gonyea, 2010; Kuncel, Crede, & Thomas, 2005). However, despite differing opinions on the utility and validity of NSSE methods and findings, the NSSE is widely accepted as a rigorous and useful instrument. McCormick (2011) and others (Cole & Korkmaz, 2011; Kuh, 2004; Nelson Laird, Korkmaz, & Chen, 2009) insisted that the quantifiers used in the survey instrument and the reliance on self-reports do not meaningfully limit the utility of the data. In fact, Kuh (2004) argued that “indicators of educational practice, such as how students use their time, [in] student reports are often the only meaningful source of data” (p. 3). Pike (1995) propelled this argument, concluding that the use of self-reported data leads to results nearly identical to those that would be reached using more accurate institutional data.

Minor changes are made to the NSSE instrument each year, including edits to the language used in the instrument, reordering, and changes in response set modifications (Kuh & Krouse, 2007). Hayek and Kuh (2004) emphatically recommended that research using NSSE data be conducted carefully to ensure validity and reliability because subsets of students must be treated as unique groups. Thus, researchers must become familiar with the conceptual and empirical foundations of student engagement and ensure the sampling scheme matches the

intended use of the data. When using original instruments, the use of anonymity, pilot testing, and voluntary assessment activities is a strategy likely to increase responsiveness and reliable results. Underlying the issue of instrumentation is the need for new research that identifies the utility of the existing instruments for specific subsets of FGS.

Barriers to collegiate success. Although initial programmatic attempts to respond to decreased retention rates were supported primarily by federal Title V funding, such programs were inclusive of FGS but did not specifically target these students. Indeed, efforts such as pre-college, University 101 courses, and the nationally supported Student Support Services program still exist on many campuses across the country, but have not focused explicitly on the unique needs of the FGS population. Indeed, as institutions create strategic plans to focus on renewed retention efforts, FGS often became the invisible minority, hidden by other demographic or SES groups to which they also belong. Additionally, this dual group membership complicates the measurement of effective strategies since FGS are often enrolled in programs that target at-risk students on the basis of their race, ethnicity, and/or other characteristics. Minority-serving institutions (MSIs), HBCUs and Hispanic-serving institutions (HSIs), for example, typically have a built-in population of FGS.

More recently, the response to the persistent disparities between FGS and CGS has been the development of institutional programs aimed specifically at retaining FGS and promoting their academic success. Contemporary literature, however, does not reveal which components of these programs are effective in assisting FGS. This may be due to the widespread disagreement about what has caused the disparities between FGS and CGS. While some have suggested the greatest obstacle to first-generation success is the inability to understand faculty expectations (Collier & Morgan, 2008), many scholars point to other internal factors as the most vital to the

success of FGS. In a quantitative descriptive study of students in their first year of academic study, Penrose (2002) examined the role of FGS' perceptions of their literacy skills in performance and persistence in college. She concluded that FGS were found to differ from their non-first generation counterparts in general academic preparedness, retention rates, and perceptions of their academic literacy skills. Results indicate that FGS' self-perceptions represent "critical factors in the college experience" (p. 456). Penrose's work underscores the significance of engaging FGS in activities that enable them to become active members of the campus community and boost their confidence in their own abilities.

Students who do not have the advantage of parents who have experienced post-secondary education for themselves often face a set of unique challenges that may act as barriers to their success. Research consistently indicates FGS are likely to perceive less support from their families for attending college (Johnson et al., 2008; Thayer, 2000); are less likely than their non-first-generation counterparts to attend school full-time (Choy, 2001; Gloria & Castellanos, 2012); and frequently experience conflicting obligations, false expectations, and lack of preparation or support (Hsiao, 1992). Although some studies have indicated that FGS tend to be *more* motivated than CGS because of a high internal locus of control (Hicks, 2005), the discouragement and alienation many FGS feel from family members regarding the college experience (Striplin, 1999) and the poverty and high levels of stress that often characterize the lifestyles of FGS are proven correlates of low academic performance (Filkins & Doyle, 2002; Gloria & Castellanos, 2012). While FGS may be more aware of their disadvantage than CGS (Hicks & Dennis, 2005), research compiled by Bozick (2007) supports the assertion that the burdens of limited economic resources and nontraditional living arrangements do, in fact, impact FGS outcomes. Seeking to analyze the socioeconomic and familial variables associated with

first-generation status, Bozick (2007) provided evidence of a correlation between college persistence and nonacademic variables, such as employment and living arrangements.

In their recent qualitative work with Hispanic FGS, Gloria and Castellanos (2012) concurred, citing low parental expectations, a lack of mentors, and practical familial support as significant impediments to successful integration and matriculation. In light of these potential barriers faced by FGS and their families, researchers have focused much attention on attempting to determine the core determinants of success. Such research has made a distinction between parents who have varying degrees of postsecondary experience. For example, Choy (2001) asserted that students' academic preparation for college varies by the extent to which the parents have pursued and attained college education, but separated the findings of parents with no college experience from those with some college, associate's degree, and bachelor's degree. Of high school graduates whose parents never attended college, less than 50% were marginally qualified or were not qualified to attend college when they finished high school, compared with 33% of students whose parents had some college education (Choy, 2001).

Predicting drop-out and stop-out decisions. There is widespread consensus that engagement in college is a function of various psychological, social, emotional, developmental, academic, and cultural pre- and postentry characteristics (Braxton & Hirschy, 2005; Guiffrida, 2006; Melendez & Melendez, 2005; Tinto, 2006), many of which have yet to be adequately addressed in the existing literature. Part-time attendance and offcampus housing patterns have been noted by many scholars (Choy, 2001; Nunez & Cuccaro-Alamin, 1998; Ishitani, 2006; Terenzini & Pascarella, 1991; Thayer, 2000; Tinto, 1990) as significant barriers to college engagement and retention for FGS. Ishitani (2006) and others (Data Quality Campaign, 2009) also noted that family income, lower educational expectation, lower high school class rank

quintile, lower high school academic intensity, enrollment in a public institution, and non-selectivity of admission were all associated with increased likelihood of drop-out and increase in the time to degree completion. As parental level of education decreases, as age increases, as length of time out of high school increases, and as GPA decreases, there is a correlational increase in the time to degree completion among students in postsecondary institutions. Student engagement has, indeed, shifted to the forefront of scholarly discourse on student retention, particularly in the context of the first-year experience and in specific at-risk groups such as FGS. In Noel-Levitz's (2011) most recent report on student retention practices, five of the 10 most effective retention strategies cited for 4-year institutions involve some degree of focus on increasing student engagement. In a study of 369 entering transfer students, Duggan and Pickering (2008) even noted that noncognitive factors are more accurate indicators than both cognitive and demographic factors in predicting student success outcomes. In a study of a similar population, Paredes (2008) yielded almost identical results. She concluded that there is a strong correlation between the precollege characteristics (high GPA, gender, father's education, and disposition/reason for attending college) and students' academic standing at the end of their first year. She also found that for students at risk for academic difficulty, their level of commitment to attaining their academic goals and dedication to doing so at the institution of current enrollment were significant indicators of first-second year retention. Unfortunately, most contemporary research (Borrero, 2011; Noel-Levitz, 2011; Santiago, 2008) often focuses on providing a macro perspective on specific institutional retention efforts rather than on providing a systematic evaluation of the effectiveness of these programs in reducing attrition, increasing persistence, and alleviating the issue of stop-out.

Choy (2001) concluded in his study of FGS at 4-year institutions that first-year FGS students are twice as likely as students whose parents had a bachelor's degree to leave before their second year. Nunez and Cuccaro-Alamin (1998) reported similar findings when comparing enrollment patterns of FGS with those of continuing-generation students (CGS). They found that FGS in their first year of study are almost twice as likely as second-generation students to delay college entrance after high school graduation, 20% more likely to live off-campus or with a family member, 25% more likely to attend part-time, and more likely to experience financial aid challenges. Using the nonparametric Kaplan-Meier method to examine attrition behavior in college students, Ishitani (2006) yielded similar findings, including an observed decline in persistence among first-generation students during the first year of study, and noted that the gaps in survival rates between FGS and CGS increased during the first 2 years of matriculation.

Ishitani's (2006) findings also indicate that the existence of financial aid yields positive effects on first-year retention. In research conducted using a national data set for college students enrolled in 4-year institutions, students who received grants or work-study jobs were 37% and 41%, respectively, less likely to depart in the first year than were students who received no aid. Even when controlling for delayed enrollment, full-time employment gender *and* financial aid, first-generation status was found to be a significant indicator of student attrition prior to the second year of study (Choy, 2001). Research compiled by Iryana Johnson (2006) suggests that first-semester assessment is critical to identifying high-risk students for early intervention. Additionally, part-time enrollment and delayed matriculation are also associated with higher risks of drop-out or stop-out, especially in the initial semesters of enrollment (IHEP, 2011).

To counter these variables, institutions have shifted their focus to include an emphasis on student engagement. Kuh and Kinzie (2006) concurred, asserting that participation in cocurricular activities is positively related to persistence. Kuh (2001) described student engagement as a representation that is inclusive of “the effort, both in time and energy, students commit to educationally purposeful activities as well as the institutional conditions that encourage students to engage in such practices” (p. 16). There is growing evidence that points to the positive effect student engagement has on desired outcomes in college (Astin, 1993a, 1993b; Greene, Marti, & McClenney, 2007; Kuh, Kinzie, Schuh, & Whitt, 2005; NSSE, 2000, 2003; Pascarella & Terenzini, 2005). Many assert that engagement may be particularly important for the students at the greatest risk for failure and departure (Cruce, Wolniak, Seifert, & Pascarella, 2006; Greene et al., 2007; Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2007). However, despite the pervasive reports of negative relationships between minority status and academic performance, African American and Hispanic students report greater levels of engagement than their White peers (CCSSE, 2011; Hu & Kuh, 2002).

Student engagement has, indeed, moved to the forefront of scholarly discourse on student retention, particularly in the context of the first-year experience and in specific at-risk groups such as FGS. In Noel-Levitz’s (2011) most recent report on student retention practices, five of the 10 most effective retention strategies cited for 4-year institutions involve some degree of focus on increasing student engagement. In a study of 369 entering transfer students, Duggan and Pickering (2008) even noted that noncognitive factors are more accurate indicators than both cognitive and demographic factors in predicting student success outcomes. In a study of a similar population, Paredes (2008) yielded almost identical results. Unfortunately, contemporary research (Santiago, 2008; Noel-Levitz, 2011; Borrero, 2011) often focuses on providing a macro

perspective on specific institutional retention efforts rather than on providing a systematic evaluation of the effectiveness of these programs in reducing attrition, increasing persistence, and alleviating the issue of stop-out. Although ample research exists to confirm the positive effects of student engagement on academic outcomes, few studies focus on the correlation between engagement and success for minority students (Greene et al., 2007; Hu & Kuh, 2002; Townsend, Donaldson, & Wilson, 2004). This indicates that contemporary researchers must begin to investigate the *specific* conditions that lead to increased engagement for these and other students. Emphasis must be placed on exploring the underlying impetus for educational differences rather than on merely reporting the descriptive disparities in achievement outcomes for these higher education students.

Socioeconomic instability and financial hardship. Notably, self-reported lack of funds is a well-established correlate of attrition (Tinto, 1993). Perhaps to counter a lack of funds, FGS often hold jobs while in college (Pascarella et al., 2004). Tinto (1993) contended that in many cases, part-time employment can be beneficial because it enhances students' abilities and interests and potentially directs students toward post-college job opportunities. However, FGS are likely to have *full-time* jobs, which have been found to correlate strongly with attrition (Billson & Terry, 1982; Data Quality Campaign, 2009) due to the challenge of maintaining balance between the demands of full-time employment and college-level academic work. Students who do not delay college entry and who attend school on a full-time basis are more likely to graduate.

Using the selection-to-work hypothesis, Bozick (2007) explored whether students from families with limited economic resources are more likely than their affluent peers to hold jobs and to live at home during their first year of college. He also addressed the impact of

employment and financial resources on persistence. Using data from the Beginning Postsecondary Students Longitudinal Study of 10,614 first-year students conducted by the National Center for Education Statistics (NCES), Bozick suggested that although employment itself does not impede persistence, students who are employed at high levels of intensity (greater than 20 hours per week) had lower levels of persistence. More than 50% the low-income students in the study lived with their parents, compared with 31.3% of high income students. Even when controlling for socio-demographic characteristics, academic preparation, enrollment characteristics, state unemployment rates, high school employment, and family obligations, affluent students persist at a higher rate than their low-income peers because of high levels of economic support and family wealth. Further, Lohfink and Paulsen (2005) found that each \$1,000 increase in grant aid was associated with a 2.7% increase in the probability of persistence from the first to the second year. For each \$1,000 increase in work-study aid, FGS were 6.4% more likely compared to 4.4% of CGS. As expected, the converse is true of financial aid distributed in the form of loans. While historically, policymakers have believed that loans enable students to persist, student loans have been observed to have a negative effect on persistence (Dowd, 2006), and have been deemed a primary factor associated with chronic stop-out, except with graduate student populations (Gururaj, Heilig, & Somers, 2010). This is due in part because of the strenuous consequences of a high debt-load and the familial SES of FGS.

The role of faculty and peers in increasing student engagement. Traditionally, colleges and universities have provided a variety of academic support services to students experiencing academic difficulty. Since the early 1900s, these students have participated in preparatory or developmental courses and programs. In fact, it has been estimated that 70–90% of all colleges offered such programs as recently as 1997 (Moreno, 2004). This emphasis on

purely academic variables and outcomes, however, has shifted in recent years. Contemporary scholars have expended a great deal of time studying the impact of student engagement, with mixed results (Astin, 1975; Pace, 1984; Tinto, 1993; Pascarella et al., 2004). While Astin (1975) and Tinto (1993) initially concluded that involvement in campus clubs and organizations has a significant correlation with student persistence, more recently, Lohfink and Paulsen (2005) found that frequent participation in these activities was significantly and positively related to persistence only for CGS, but not for FGS. However, Kuh and Crouse (2007) deduced that first-year student engagement in educationally purposeful activities had a positive, statistically significant effect on persistence, even after controlling for background characteristics, other college experiences during the first college year, academic achievement, and financial aid. Pace (1984), who also compared the level and type of experience as related to student engagement, found that although academic, student-centered activities do have the greatest impact, social activities extend students' network of support, increasing their chance of college persistence. Pascarella et al. (2004) concurred in their exploration of the impact of organizations, activities, and mentorship on FGS success. In a study of precollege characteristics, social and academic adjustment, college environment, and school level characteristics, Fischer (2007) found that having more informal relationships on campus resulted in a reduced likelihood of attrition. For minority students, participation in extracurricular activities diminished the likelihood of their leaving college by at least 83%. This figure was even higher for Asians and African Americans. Moreover, having more *formal* academic ties (i.e., connections with professors) was positively correlated with GPA, and having both formal and informal social ties was positively correlated with college satisfaction.

Similarly, in a study of CoL, Inkelas et al. (2007) found that students enrolled in living-learning programs reported greater success in academic and social transitioning than those who were not enrolled in such programs, when researchers controlled for individual levels of self-confidence. The students in the study also reported greater interaction with faculty as a key factor in their positive academic outcomes. Additionally, the researchers concluded that structured activities with peers and faculty were more influential than informal interactions. Lohfink and Paulsen (2005) suggested that the discrepancies in these findings may indicate that even more than campus organizations and events, the *institutional arrangement* of campus activities may be an additional determinant of the effectiveness of these activities in increasing persistence. They asserted, for example, that campus clubs and activities may be set up in “ways that reinforce the values and priorities of CGS as well as in ways that better accommodate their schedules” (p. 413). Thus, FGS who are employed and work more hours per week and have more family commitments than CGS may find participation in campus activities to be infeasible. Pickering (2008) also identified this “need for balance” as a significant barrier to success for first-year students who are employed part- or full-time while enrolled in courses.

When exploring Hispanic FGS, Gloria and Castellanos (2012) found that the institution may serve an even more specific function for minority students; they suggested that students’ “academic family” may be a surrogate for their biological one. From this perspective, faculty, peers, and institutional personnel act as a buffer to assist students in navigating educational challenges.

Indeed, research conducted in the 21st century has heavily emphasized engagement and the role of specialized programmatic efforts in improving rates of retention and success for students whose parents have not earned a college degree. In a project evaluation of the Building

Engagement and Attainment for Minority Students (BEAMS) retention program, Bridges, Cambridge, Kuh, and Leegwater (2005) advocated making an institutionalized response to retention issues. The researchers suggested that programs that gain support for institutional sustainability are positioned to improve academic outcomes for FGS. Bridges et al. identified specific practices for institutions seeking to increase the retention and enrichment of matriculating FGS, such as promoting university-wide early intervention and mentorship. In their 2004 work, Umbach and Wawrzynski (2004) concurred, suggesting that faculty interaction and out-of-class engagement are two of the most meaningful variables in student success and retention. In a recent study of faculty and peer mentorship of first-year students at a liberal arts college, D'Abate (2009) found that faculty mentors were responsible for directing, academic goal setting, goal tracking, sharing information, problem solving, providing feedback, advising, teaching, and modeling behaviors for the students they serve. Although many of these tasks are similar to those of a peer mentor, faculty tended to emphasize the importance of faculty involvement in the academic components of mentoring. Paredes (2010) found that even students who *perceived* support from faculty were significantly more likely to end the first semester in good academic standing, corroborating Tinto's (1993, 2007, 2008) emphasis on the effects of faculty support of high-risk students.

Faculty interaction may also serve to increase students' opportunities for out-of-class research experiences and generally improve their aspirations for degree completion and post-baccalaureate education. In a study aimed at measuring educational attainment among college students, McCarron et al. (2006) found that 62% of the undergraduate FGS in their sample did not attain their original aspirations. Although 40% aspired to complete the bachelor's degree, only 29.5% actually completed the degree within 8 years. Further, in spite of the fact that

approximately 25.0% of the respondents aspired to graduate degrees, less than 3% of them attained degrees past the bachelor's. The authors suggested that faculty-student interaction may be able to offset these low completion rates.

Communities of Learning (CoL). This notion of value-added education was also emphasized by Zhao and Kuh (2004) in their examination of the role of learning communities in enhancing FGS engagement and academic performance. Communities of Learning have been broadly categorized to reflect tenets of basic definitive strategies. These strategies include the use of residential programs; linked course, interdisciplinary team-taught programs; student cohorts in existing classes; and paired or clustered courses (Swaner & Brownell, 2008). The general manifestation of the CoL structure may be summarized in four common approaches: curricular learning communities, which consist of a common theme that links two or more academic courses in which the student is co-enrolled; classroom learning communities that use interactive pedagogy; residential learning communities (sometimes referred to as living-learning communities), which incorporate a shared living space as students take courses within a small cohort; and specified CoL for selected student populations that fit a particular demographic or personal profile, such as FGS, Hispanic students, or honors students (Zhao & Kuh, 2004). Researchers have discovered that experiencing college as a part of a CoL is strongly linked with active and collaborative learning and interaction with faculty (Zhao & Kuh, 2004). Their findings indicate that CoL act as an intermediary to increase student interaction with faculty. This research also yielded the notion that learning communities have stronger effects for first-year students than for seniors; however, for both groups participation in CoL was associated with higher levels of academic effort, academic integration, interaction with faculty, and active and collaborative learning.

In an analysis of the impact of social relationships on precollege and first-year experiences, Hicks (2005) hypothesized that students who engage in a high level of social discourse, particularly in organized extracurricular activities with specialized groups, would be more likely to remain enrolled in college through the second year than those without such activities. He demonstrated a correlation between social relationships and college persistence and readiness. Hicks's conclusions provide an ideal basis for the present research, which identifies the role of organized retention activities in motivating student retention during the first year of study. The current study examined the correlations among mentorship and other social interactions that may increase student success. Pickering (2008) also noted that social integration was especially impactful in a sample of transfer students.

The integration of first-year students with upper-level students. Little is known about the utility of integrating first-year students with students who have reached more advanced stages of their matriculation. In fact, much of the literature on first-year students centers on the widely accepted notion that the first year of postsecondary education is so unique and pivotal in a students' development that it warrants its own first-year experience (FYE) program. These programs are typically implemented as institution-sponsored, cohort-based programs in which students participate in courses with an integrated pedagogy, such as CoL (Santiago, 2008), or with a shared living space, as in living-learning communities (Inkelas et al., 2007). Although the literature does not identify the role of this type of cohort, it is plausible that integrating first-year students with their older peers may increase their exposure to critical thinking, the frequency of their interpersonal interactions, and their self-confidence through the use of collaborative groups (Caufield & Percell, 2006). When comprised of older students and first-year students, these groups may be more beneficial to FGS because they also offer social support (Caufield &

Percell, 2006), increased engagement with the subject matter, and greater opportunities for group problem solving and resolution. These skills are particularly useful for FGS during the critical first year because of the FGS' frequent lack of social capital (Kuh et al., 2008) and other academic risk factors. Integrated, mixed-classification collaborative groups or classes of students with varying levels of involvement, student collaboration are a novel strategy worthy of investigation.

In spite of the extensive number of pioneering retention interventions that have surfaced in the past 10 years, such as holistic advising and first-year programs, aside from mentorship, few strategies have integrated first-year FGS with upper-level students in the classroom setting. In an analysis of subject-specific programs and the role of social integration in student success, Ory and Braskamp (1988) provided a context for examining the level of integration used in post-secondary programs. Nunez and Cuccaro-Alamin (1998) extended this research by identifying unique characteristics of FGS engagement during their first year of college. In an intense case study of FGS, they found first-year FGS to be more likely to self-report low levels of involvement with academic advisors and study groups, differences that are more pronounced in 2-year public schools than in 4-year public schools (Nunez & Cuccaro-Alamin, 1998).

Interestingly, FGS were also found to have lower levels of social integration than other students. They were reportedly less likely to engage in social activities, clubs, and extracurricular activities than their peers (Nunez & Cuccaro-Alamin, 1998). This may be due, in part, to FGS' propensity to hold part-time employment while enrolled in school and living off campus during their first year of college. This suggests that socioeconomic factors present increased demands of many FGS that may limit or impede their first-year engagement and performance.

Formal mentorship in the collegiate environment. Mentorship is also an essential component in the first-year process for many students. *Formal mentorship* is the terminology used to describe structured and intentional mentorship practices that are conducted in a routine and sustained way (Institute on Higher Education Policy, 2011; D’Abate, 2009). Hughes, Boyd, and Dykstra (2009) characterized the student or faculty mentor as an “empathetic, enthusiastic, and trustworthy” confidante who maintains an interdependent relationship with the mentee and the institutional support staff. D’Abate (2009), who challenged the widespread ambiguity of the purpose and scope of mentorship, contended that the role of mentors varies widely from one campus to another. She described mentorship as a “developmental relationship . . . between a more experienced individual and a less experienced [one] to serve a variety of functions,” including socialization, role-modeling, and skill development (p. 66). This relationship, increasingly viewed as developmental in nature (D’Abate, 2009), has considerable utility in the collegiate environment, particularly with students who are at risk for stop-out, academic failure, or drop-out. These authors all distinguished between two primary roles of the mentor. First, the mentor serves to fulfill a task-related/career-related role in which he/she assists the student in navigating the campus community, obtaining successful academic outcomes, and preparing for graduation and beyond. The second, more discreet role is a psychosocial one in which the mentor acts as counselor and friend to the student mentee. Although scholars are not in agreement about the functions or limits of such roles, there is consensus across the literature that sponsorship, training, and pairing of mentors/mentees are typically responsibilities adopted by the students’ institution. The literature on mentorship in higher education has yielded mixed results. While some have argued that the impact of mentorship is limited to behavioral effects, contemporary research has consistently revealed that

formalized mentorship may have profound effects on academic, personal, and social aspects of students' lives, particularly students who belong to racial and ethnic minority groups (Crisp & Cruz, 2009; Institute on Higher Education Policy, 2011). In a 2-year study of a formal collegiate mentoring program, Salinitri (2005) sought to explore the effects of adult mentorship on the retention rates and academic performance of FGS. Using the Windsor University database of 128 Arts and Sciences students' high school scores to establish a baseline of performance, Salinitri compared students who participated in a 1-year formal mentoring program to those who were not formally mentored. She collected data on the number of courses failed each semester, students' grade point average, and their academic status. Mentors in Salinitri's study were teachers who received graduate credits for their participation. Results of the study indicate that formal mentorship had a statistically significant positive effect on retention, feelings of self-efficacy, and reducing early failure in the students' academic career according to academic scores.

The findings of this study are consistent with the literature on first-year students, who are tasked with maintaining academic success while balancing the rigors of navigating the college environment for the first time. Salinitri reported that more than 80% of students selected to evaluate their experiences in the program reported their mentors to be effective in the key areas that affect retention: skills development, provision of resources, and improving academic performance. The findings reported in Salinitri's study are vital to institutions that serve low-performing or at-risk students, particularly those attempting to increase retention rates under strict budget constraints. Similarly, in a study of FGS at 33 4-year institutions that use living-learning programs, Inkelas et al. (2007) found that structured interaction between students and faculty and between students and peers was more influential than informal peer groups. Duggan

and Pickering (2008) expanded this notion by correlating academic integration with persistence; their findings indicate that students who participate in research opportunities and other activities with peers and faculty tend to persist at a higher rate than students who do not integrate.

The results of this body of research indicate that offering formal mentorship programs may be a viable and affordable strategy to improve academic performance and first-year satisfaction among students who have the highest risk of attrition. Melendez and Melendez (2010) argued that participation in college activities and programs and assistance from college faculty may be limited by off-campus residential status and employment, making it difficult for students to establish and maintain social networks. Thus, these students have a greater propensity to experience disconnection from peers and mentors, relationships with whom have proven integral to the success of these students. However, research suggests that mentors play a crucial role in connecting participants to campus despite these challenges by encouraging involvement in student organizations and peer networks (Shotten, Oohsawe, & Cintron, 2007). Mentorship may also help students to learn balance, the lack of which is a key barrier to success in the collegiate environment (Pickering, 2008), and offset the significant incongruence between the attitudes and the behaviors of first-year students (Duggan & Pickering, 2008).

Summary

A review of the literature on FGS retention strategies and first-year success reveals a significant absence of relevant research on this topic. From that which does exist, several salient themes emerge concerning the study of FGS. First, the theoretical underpinnings of studies on student persistence and departure rest on assumptions about core differences between FGS and continuing-generation students. These assumptions persist in spite of anecdotal data that suggest such differences do not become meaningful until placed in the context of socioeconomic status.

Second, methodological challenges have impeded many attempts at research on first-year experiences, primarily due to ambiguities in the definitions and characterizations of first-generation students. Third, the barriers to college entrance and matriculation that surface in almost all existing research are often difficult to assess and are undergirded by extensive SES and racial/ethnic disparities across the population. And finally, scholars diverge on whether these variables are causally related to student success.

Although much of the scholarly work on collegiate success has stressed aggregate student behavior, there is a sizable body of work aimed at exploring the role of institutional paradigm in shaping student success. In *The Learning Paradigm College* (2003), John Tagg suggested that higher education must be organized in a way that centers on learning. Tagg pointed out the distinctions between an *Instruction Paradigm* and a *Learning Paradigm*, asserting that the functional frameworks that are often overlooked act as the very source of institutional progress or failure in promoting successful learning. The Instruction Paradigm emphasizes formal, individual structures and processes targeted toward improving the performance of classes. Conversely, the Learning Paradigm, which focuses on learning-centered practices, aims to improve student learning at an institutional level.

Much of the existing research has also focused on predicting drop-out decisions based upon demographic characteristics rather than on the identification of factors that influence student retention. Although a considerable amount of research has been conducted on the reasons students drop out of school, relatively little is known about the specific predictors of FGS student retention and success. Researchers have typically focused on the characteristics of FGS and their experiences in college; yet, there is a notable gap in research that addresses the specific retention practices that can affect college persistence for this unique population of

students. The available literature is also void of any evaluative findings on existing institutional retention programs that serve FGS and their families.

It is crucial that new research be generated to fill this gap by providing a contextualization of practices that are effective in reducing the disparities between FGS and non-FGS. Contemporary research must examine specific retention strategies used on college campuses within the context of first-to-second year retention rates and student engagement scores. Specifically, emerging research should be guided by the following questions, which emphasize pedagogical and programmatic trends of the 21st century:

1. Does a correlation exist between classroom integration of lower- and upper-level students in Communities of Learning and the first-to-second year retention of first-generation college students?
2. Does the use of faculty mentorship have an effect on the first-to-second year retention and engagement of first-generation college students?
3. Does the use of peer mentorship have an effect on the first-to-second year retention and engagement of first-generation college students?
4. Does the collaboration of student support services have an effect on the first-to-second year retention of first-generation college students?

Thus, previous research suggests the need for theoretical and practical consideration of the experiences of first-year FGS and the characteristics that impact their risk for failure. New research must also center on paradigmatic shifts in the methodologies and settings used to investigate FGS and CGS. Trajectories of persistence and retention should be studied in the context of the students' internal and external locus of control, and across the wide spectrum of collegiate environments in which they exist. Low graduation rates at HBCUs have been

attributed to a number of the variables mentioned here, including the fact that many of the students enrolled at these institutions are from low-income families, in which neither parent nor grandparent went to college. Many students do not arrive at college with strong academic preparation and study habits, and graduation results at the HBCUs are worsened by the fact that “many flagship universities in the southern states often tend to shift the lowest-performing black applicants into the state-controlled black colleges in their state” (“Black Student College Graduation Rates,” 2006, p. ?). These complex challenges position HBCUs as ideal settings in which to study retention, persistence, and success among FGS.

CHAPTER THREE: METHODOLOGY

The purpose of this study was to examine an institutional program that has implemented three key retention strategies (lower/upper-level student integration within CoL, faculty mentorship, and peer mentorship) to identify the extent to which those practices impact the academic success of FGS, as measured by first-to-second year retention and student engagement. This research examined the program and its components to discover the extent to which such practices impact the academic success of the participants.

A formal institutional retention program was used in this study. The program is offered by regionally accredited institutions; all courses and mentorship were facilitated on campus by experienced educators. The program is ongoing, and data were collected at the end of the 2012 fall term over a 2-month period. Students earn three semester hours of college credit for each course taken while enrolled in the program and obtain community service semester hours for each completed service project. Mentorship is delivered in both formal and informal settings but was not limited to a particular venue or location on campus. Formal program activities consist of a CoL with courses that integrate freshman and upper-class students, as well as offer financial and academic support services to first-generation participants. Trained mentors and faculty support staff provide course content, communicate weekly with students, and offer academic intervention. Furthermore, the program's CoL uses teacher-student collaboration to facilitate class and small group discussions and collaborative course assignments.

Research Design

This quantitative research design was submitted to the Liberty University Institutional Review Board (IRB) after obtaining permission from the dissertation committee and dissertation

chair to proceed with the study. All necessary protections were provided for human subjects to include a clear explanation of the research focus and the use of an informed consent form.

An ex post facto causal-comparative and correlational quantitative design was used to examine and describe the effects of the three key retention strategies on the academic success of FGS as measured by first-to-second year retention rate and student engagement. This research design permitted the researcher to explore the plausible varied relationships between and among the independent and dependent variables. This design is particularly useful due to the inability to control the levels and types of student interaction with CoL integration and mentorship activities.

The research was guided by the following questions and hypotheses:

1. What impact does the use of the classroom integration of first-year and matriculating students in Communities of Learning have on the first-to-second year retention of first-generation students?

Null Hypothesis 1, H_0 is: There is no statistically significant difference in the first-to-second year retention of first-generation students who have been integrated with upperclassmen in Communities of Learning and those who have not, as shown by second-year institutional enrollment data.

2. What impact does the use of the classroom integration of first-year and matriculating students in Communities of Learning have on the first-to-second year level of engagement of first-generation students?

Null Hypothesis 2, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been integrated with upperclassmen in Communities of Learning and those who have not, as shown by the 19-item engagement survey.

3. Is there a difference in the first-to-second year retention of first-generation students who are formally mentored by faculty when compared with those who are not?

Null Hypothesis 3, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been integrated with upperclassmen in Communities of Learning and those who have not, as shown by the 19-item engagement survey.

4. Is there a difference in the level of engagement of first-generation students who are formally mentored by faculty when compared with those who are not?

Null hypothesis 4, H_0 is: There is no statistically significant difference in the level of engagement of first-generation students who have been formally mentored by faculty and those who have not, as shown by the 19-item engagement survey.

5. Is there a difference in the first-to-second year retention of first-generation students who are formally mentored by peers when compared with those who are not?

Null hypothesis 5, H_0 is: There is no statistically significant difference in the first-to-second year retention of first-generation students who have been formally mentored by peers and those who have not, as shown by second-year institutional enrollment data.

6. Is there a difference in the first-to-second year level of engagement of first-generation students who are formally mentored by peers when compared with those who are not?

This research design was selected because it attempts to explore possible relationships between multiple independent variables and dependent variables in a research setting in which the investigator is unable to control the independent variable (e.g. levels and types of mentorship activities) and is unable to randomize. A pilot test of the instrument was conducted to ensure the soundness, clarity, and utility of the assessment instruments in this setting. This design allowed the researcher to examine the data retrospectively to establish correlations between the

independent and dependent variables. Although a more rigorous experimental approach is ideal, this method prevents the high level of artificiality that is often introduced with other types of research proceedings.

A voluntary retention program was selected for observation. Permission from the institution was obtained and letters of support were included in the IRB application.

Variables

The independent variables in this study included all three key retention strategies, which are lower/upper-level student integration in CoL, faculty mentorship, and peer mentorship. The first-to-second year retention and student engagement score served as the dependent variables.

Sampling Strategy and Methodology

The institution enrolls approximately 6,000 undergraduate students. Of approximately 1,200 freshmen at each institution, roughly 400 are FGS, and of that number, the vast majority are African American. Currently, data are collected internally on student satisfaction, student entry points, and matriculation, but no institutional data regarding generational status or persistence of FGS are collected.

Permissions were granted to obtain data from program staff, participants, and the university office of the registrar. Data were collected by Hilman University employees to ensure anonymity of all participants. These employees administered the survey instrument and the researcher maintained responsibility for coding data using student participants' identification numbers to protect student privacy, as required by the Family Educational Rights and Privacy Act (FERPA). The codebook will be maintained in a locked facility. Participants for this study were selected at random from two cohorts of FGS who had participated in the retention program. Considering the numerous types of FGS enrolled in a 4-year institution (e.g. online, residential,

hybrid), this study designated a defined population of students. The population identified for this study consisted of FGS who enrolled in their first year of residential coursework in the fall semester of 2010 or 2011 in an accredited undergraduate program at the HBCU under study. Seventy-five participants were recruited through sampling from the Hilman University's Program for the Retention and Enrichment of Successful Students current roster of program participants.

Participants

For this study, approximately 150 participants were selected from a sampling frame of the 2010 and 2011 cohorts of first-year FGS enrolled in the student retention program. These students enrolled in the program prior to the first year of study at the university through a voluntary recruitment process. The population identified for this study consisted of FGS who participated in the formal retention program while enrolled in their first year of full-time residential coursework in an accredited undergraduate program at Hilman University. Participants for the study were selected at random from an institutional list of first-generation freshmen students enrolled in the university's retention program. Students who qualified as first-generation under the program's definition (i.e. students whose domiciliary parent(s) had not obtained a college degree) were identified by the program's eligibility requirements prior to their acceptance to the program.

A random sample of students was selected as determined by survey response rate. The total population of program participants reflected a representative proportion of each race and ethnicity in the institution's student population during the 2010-2012 academic years. It is recognized that some racial and ethnic groups were not represented among students who had enrolled in the retention program and/or responded to the questionnaire. The researcher included

this information in the report of research findings. Participants were recruited through sampling from a list of Hilman University's Program for the Retention and Enrichment of Successful Students current roster of program participants for the 2010-2012 academic years. The sample included male and female FGS who were eligible for second-year enrollment and who were between the ages of 18 and 21. All participants had completed their first year of post-secondary study and participated in this research on a voluntary basis. The selection of only students who had participated in the program permitted the standardization of within-group differences that may act as extraneous causes of retention or drop-out. The selection threat to internal validity that could have emerged from using voluntary participants in the retention program was minimized by the heterogeneity of the program's participants.

Setting

This research was conducted at a mid-size 4-year institution in Virginia. The regionally accredited institution enrolls approximately 5,000 undergraduate students. Of approximately 1,500 freshmen at the institution, roughly 400 of these students were FGS, and of that number, the vast majority were African American. A voluntary retention program was selected for observation. Permission from the institution and from the retention program grantor was obtained and letters of support were included in the IRB application. The program is privately funded and is currently operating on a private HBCU campus. The total 2-year enrollment for the retention program was 150 students.

The program strategies are implemented in the summer, fall, and spring semesters of the academic year. Students are provided with both mandatory and voluntary activities, both online and in person. Peer and faculty mentors serve on a voluntary basis and all activities are sanctioned by the institution.

Instrumentation

To collect data for this study, the researcher used a single 19-item, 114-question questionnaire. The selected method provided a better understanding of the first-year experiences of FGS enrolled in student retention programs. First-to-second year retention and student engagement were the dependent variables for the present study. All first-to-second year persistence data were obtained during the fall 2012 academic semester by Hilman University employees.

Student retention and success data were assessed through a self-administered questionnaire modeled after and adapted from the National Survey of Student Engagement, composed of two sets of questions. The first set of questions was designed to assess demographic information (i.e. institutional classification, race, age, gender) for the purpose of obtaining descriptive statistics on the sample. The second set of questions was used to determine the participants' current academic status and participation in activities related to engagement. These programmatic participation data were obtained using self-report measures on an index scale to determine levels of engagement. The researcher did not have access to student names or other identifying material.

Student engagement was measured by an original instrument adapted from the Survey of Entering Student Engagement (SENSE) and the National Survey of Student Engagement (NSSE). The SENSE survey instrument was ideal for use in the present research setting because of the unique characteristics of HBCUs and their student populations that mimic those of the community colleges (i.e. first-generation, low-income) for which the instrument was initially developed. The SENSE measures the extent to which student participation levels in defined practices influence positive outcomes for students. This is an appropriate instrument by which to

measure self-assessed student engagement and student engagement because it identifies the type, quality, and level of first-year student interaction with peers, faculty, and student support staff.

NSSE instruments are validated. NSSE uses Cronbach's alphas for the NSSE Deep Learning scales and provides average inter-item correlations by class and scale inter-correlations. The results of these measures indicate a high degree of reliability for the overall scale and subscales. The Cronbach's alphas range between .699 for the first-year Integrative Learning subscale and .856 for the senior overall Deep Learning Scale. The average interitem correlations fall within acceptable levels. All the corrected item-scale correlations are positive and high. The results suggest that the NSSE scales are reliable (NSSE, 2012). However, reliability may be limited due to the narrow specificity of the population under study. The proposed pilot study of students currently enrolled in the retention program allowed the researcher to identify distinct weaknesses or risks in the use of this instrument.

Procedures

This research commenced upon submission of an Institutional Review Board (IRB) application and its subsequent approval. Prior to the last month of the academic semester, school personnel contacted the student participants by e-mail on behalf of the researcher to inform them of the study and to obtain their informed consent for participation. The invitation letter explained the purpose of the study and requested that students complete the questionnaire within a 2-week period. Student privacy was protected through strict compliance with the Family Educational Rights and Privacy Act (FERPA). Participants were also provided a document detailing the individual rights protected by FERPA. Because intrusive data collection may impact the students' experience in the program, care was taken during the data collection process. Additionally, to prevent potential negative impact the findings may have on the

institution, pseudonyms were used for the name of the institution, the program, and all other sensitive or identifying titles and trademarks. Only essential demographic information that is unique to the sample is divulged in the findings.

The total sample of 75 first-generation official program participants from the program's database of 150 FGS who participated as a part of the 2010 or 2011 cohorts responded to the questionnaire. All participants in the sample (both continuing students and those who had dropped out prior to the second year of study) were provided a 19-item, 114-question online questionnaire to assess demographic information and engagement in retention-focused activities. Participants also answered questions related to persistence decisions and continued enrollment. This questionnaire is an original instrument with measures of student persistence and engagement in both classroom and extracurricular activities. It was adapted from the SENSE and NSSE questionnaires. Questionnaire items were modified to suit the specific context of the institution and the research emphasis of the current study. The modifications allowed the researcher to capture the type, quality, and level of first-year student interaction with peers, faculty, and student support staff.

Based upon responses to the questionnaire, participant responses were divided into two groups for comparison: those who persisted as full-time students at Hilman in the fall of the second year of study and those who did not persist. Groups were compared quantitatively in terms of persistence decisions (retention) and engagement.

As data were collected, they were stored in a password-locked and confidential online database until they were coded by the researcher. The original data records, including returned surveys, field notes, and test protocols, will be retained for 5 years, after which they will be destroyed in a way that will render them unrecognizable.

Data Analysis

Once the data collection was complete, the questionnaire responses were analyzed. Participant responses were divided into two groups: those who persisted to the second year of study and those who dropped out prior to the second year of study. The two groups were matched on all demographic characteristics and GPA range to ensure that the individuals in the continuing program and nonmatriculating groups were comparable in demographic characteristics (race, age, gender, and socioeconomic status), since each of these variables has been correlated with student enrollment decisions.

Participant characteristics such as age, gender, and level of participation in the continuing program group and the nonmatriculating program group were also compared using the chi-square test. A one-way multivariate analysis of covariance (MANCOVA) was used to analyze the differences between these groups because a MANCOVA takes into consideration the correlation among the dependent variables while removing the effects of the covariates. A $p < .05$ level of significance was used for all analyses in the study to determine whether the null hypotheses (that the three independent variables have no effect) could be rejected. Effect size was calculated using Cohen's d (Cohen, 1988).

The use of a standardized, validated instrument increased the validity and reliability of this research design. Care was taken to administer the tests without variation to prevent an instrumentation threat. Empirical integrity was increased by employing consistency in the administration process, as well as using nonprogram staff to score the assessments. The internal validity of this design has relative threats, including experimental mortality (students' attrition rates may be directly impacted by their programmatic retention rates), maturation, testing, and selection bias. Maturation is a considerable threat because of the natural tendency for students to

increase their engagement as they matriculate. The use of MANCOVA allowed the scores to be adjusted for initial differences.

Selection bias may pose a risk since the program under study is voluntary. Students who volunteered to participate may have an inherent propensity to achieve or persist. Further, the literature suggests that validity may be generally increased by ensuring that FGS are compared with other FGS rather than with CGS. Thus, while it may be assumed that all FGS possess characteristics that are uniquely divergent from those of second-generation students, the threat of this second level of selection bias is reduced through sampling only FGS for both the continuing program group and the non-matriculating program group. This selection process ensured that confounding variables were limited; however, because FGS are such a diverse population, it is difficult to control for these antecedent conditions even with the use of a pretest. Precollege differences and between-group differences were adjusted by MANCOVA.

External validity is strengthened by attempting to generalize only to FGS who are enrolled in historically Black colleges and universities (HBCUs). The *size* of the sample also limits the generalizability of the findings, but the research uses purposive sampling of students at an HBCU due to the unique barriers faced by African American students in the HBCU setting. Additionally, particular attention must be given to the environment of an HBCU and the unique setting of an HBCU. This further reduces generalizability to only HBCUs that are similar in size and in the population served.

These data were compared with data from the Integrated Postsecondary Education Data System (IPEDS) collected by the U.S. Department of Education. IPEDS offers a more comprehensive census of postsecondary institutional data.

CHAPTER FOUR: FINDINGS

This chapter provides the findings of this research, which sought to examine institutional strategies for improving the retention of first-generation minority college students. The research addresses three goals: (a) to understand the conceptual and practical bases on which academic retention programs have been established, (b) to isolate specific components that are credited with differentiating effective and ineffective programs, and (c) to identify issues that must be addressed in future research on FGS risk factors and programmatic response. The first section explores the descriptive results that illuminate the unique characteristics of the institution and the population under study. The second section considers the broad picture of engagement and persistence, and the final section examines categorical correlations between and among the variables of the study.

Three categories of independent variables (IVs)—(a) formal peer mentorship, (b) formal faculty mentorship, and (c) upper to lower level student integration in Communities of Learning—were hypothesized as being likely to impact the first-to-second year persistence of first-generation college students. An invitation to participate with the link to the questionnaire was sent to 150 former PRESS participants. Of the 75 student participants who responded to the questionnaire, 98.3% were age-traditional students (18–24 years old), including missing data ($n = 15$). Relatively representative of the program population, 80% of the respondents were female and 20% were male. Almost all (96.7 %) were African American, and no international students completed responses to the survey. Of all respondents, 96% are currently completing their third or fourth year of study. Over two-thirds of the sample reported a grade point average of 3.0 or better on a 4.0 scale.

An instrument containing 19 questions was developed. Each subscale contained multiple items presented with Likert-scaled response options from *Very Often* to *Never*, from *Done* to *Have Not Decided*, from *Unfriendly/Unsupportive* to *Friendly/Supportive*, or from *Very Much* to *Very Little*. Additional items included closed-ended questions on continuous enrollment, GPA, age, race/ethnicity, gender, national status, and classification.

Due to consistent findings that single-item measures lack reliability and effectiveness in adequately measuring constructs (Gliem & Gliem, 2003), this research used Cronbach's Alpha Reliability Coefficient to factor out items on the questionnaire that were not internally consistent. According to Gliem and Gliem (2003), "Cronbach's Alpha is the average value of the reliability coefficients one would obtain for all possible combinations of items when split into two half-tests" (p. 88). The alpha for internal consistency increases or decreases as additional subitems are added or removed. The closer the alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale; scholars note the established acceptable alpha is one that is greater than .5, and an alpha of between .7 and .8 is considered in the "good" range.

Using this method, the researcher established a reasonable case for removing items 1e-f, 2a, 4a, 4j, 5, 9, and 13 from the overall analysis for covariance because the Cronbach's corrected item total correlation for reliability was reduced by each of these questions.

Table 4.1

Cronbach's Alpha – Removal of Items 1e & 1f

Reliability Statistics	Result
Cronbach's Alpha	.864
Cronbach's Alpha Based on Standardized Items	.866
N of Items	13

Table 4.2

Question 1 Item-Total Statistics

Question	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@1a	35.20	44.405	.516	.410	.855
@1b	35.15	43.992	.570	.465	.852
@1c	35.85	42.721	.506	.372	.856
@1d	35.48	44.685	.463	.309	.858
@1g	35.23	46.205	.343	.359	.864
@1h	35.20	44.919	.568	.525	.853
@1i	35.39	43.727	.557	.380	.852
@1j	35.69	43.486	.514	.388	.855
@1k	36.09	42.951	.539	.388	.853
@1l	35.24	43.455	.621	.477	.849
@1m	35.91	42.978	.537	.347	.854
@1n	35.40	43.405	.568	.541	.852
@1o	35.29	42.345	.624	.491	.848

Note. Shows Cronbach's Alpha for each item in Question 1 after the removal of 1e & 1f.

Table 4.3

Cronbach's Alpha – Removal of Item 2a

Reliability	Results
Cronbach's Alpha	.846
Cronbach's Alpha Based on Standardized Items	.854
N of Items	5

Table 4.4

Question 2 Item-Total Statistics

Question	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@2b	10.16	11.149	.672	.458	.812
@2c	10.30	12.706	.482	.270	.864
@2d	9.84	12.047	.762	.620	.790
@2e	9.93	12.038	.678	.560	.809
@2f	9.94	12.229	.729	.566	.798

Note. Shows Cronbach's Alpha for each item in Question 2 after the removal of 2a.

Table 4.5

Cronbach's Alpha – Removal of 4a & 4j

Reliability	Results
Cronbach's Alpha	.736
Cronbach's Alpha Based on Standardized Items	.735
N of Items	8

Table 4.6

Question 4 Item – Total Statistics

Question	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@4b	19.41	19.784	.305	.134	.731
@4c	20.24	15.971	.560	.461	.681
@4d	20.29	16.516	.495	.409	.696
@4e	20.08	17.456	.348	.186	.727
@4f	20.58	17.263	.516	.350	.695
@4g	20.64	15.681	.563	.412	.680
@4h	20.20	17.114	.379	.212	.721
@4i	20.85	18.654	.289	.199	.735

Note. Shows Cronbach's Alpha for Question 4 after the removal of 4a and 4j.

Table 4.7

Cronbach's Alpha – Removal of Questions 5, 9, and 13

Reliability	Results
Cronbach's Alpha	.421
Cronbach's Alpha Based on Standardized Items	.404
N of Items	3

As each of these items was removed, there was a significant increase in the correlation of the remaining items. The “removed” items were removed only from this particular analysis; they were used in the discussion of the findings and underwent additional statistical analysis. The use of Cronbach also facilitated the appropriate grouping of subitems, as shown in Table 4.1.

Table 4.8

Questions 5, 9, and 13 Item – Total Statistics

Question	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@5	10.23	8.487	0.176	.139	.471
@9	10.30	5.502	.467	.221	-.180*
@13	9.73	10.165	.153	.141	.480

Note. Shows Cronbach's Alpha after the removal of Questions 5, 9, and 13 – the Alpha for Q9 has an asterisk, which indicates that the researcher could not find reliability if these items were grouped together using one factor.

Table 4.9

Subset Question Groupings

Descriptive Category	Question
Post-Second Year Engagement Skills and Abilities	1a-1e; 1g-1o; 8a-c; 8e
Mentorship Experiences	2a-2f; 12
Active Engagement	3a-3f; 4a-4j; 8d; 8f-8h
Relationship Quality	10
Persistence	6; 7
Community of Learning	11
Demographic	15 – 19
GPA	14

The dependent variables were transformed into categorical variables for additional analysis. The items indicated in the reliability analysis were summed, and for each question, if any valid item was missing for a respondent, that response was recorded as missing. For each summed variable, if the sum was equal to or below the median, then it was coded as 0; otherwise

it was coded as 1. The sole exception, Q2, was coded as zero if respondents only indicated *Neither*; otherwise it was coded as 1.

To test the strength and direction of the assessed relationships, Pearson's Rho was used. The *p* values (with an accepted alpha level of $< .05$) indicate a strong correlation between overall engagement (Q1+Q3+Q4+Q8) and the number of faculty activities, and between the student engagement (Q8) and students' perceptions about their experience with the peer or faculty mentor (Q12).

Table 4.10

Analysis – Correlation Regression: Overall Engagement & No. of Faculty Activities

Analysis of Variance					
Source	df	Sum of Squares	Mean of Squares	F Value	Pr > F
Model	1	452.38918	452.38918	4.16	0.0463
Error	54	5875.16439	108.79934		
Corrected Total	55	6327.55357			
Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	56.03212	2.63391	49238	452.56	<.0001
F1	1.56565	0.76781	452.38918	4.16	0.0463 ^a

^aA strong correlation between Overall Engagement and No. of Faculty Activities is statistically significant as is indicated by a *p* value of less than .05.

Table 4.10

Correlation Between Engagement & Student's Perceptions About Mentor Experiences

Variable	Statistic	Variable Student Perceptions
Engagement (Sum Q1 a-d, g-o; Q3; Q4b-l; Q8f-h)	Pearson Correlation	0.21770
	Prob > r under H0: Rho=0	0.1038
	N	57

Moderate correlations between engagement and student's experience in the CoL (when regressed onto the number of faculty activities) exist.

Table 4.12

Analysis – Correlation Regression: Overall Engagement, Student's Experience in CoL

Analysis of Variance					
Source	df	Sum of Squares	Mean of Squares	F Value	Pr > F
Model	2	39.34975	19.67488	5.59	0.063 ^a
Error	53	186.48953	3.51867		
Corrected Total	55	225.83929			
Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.34708	1.19744	4.45305	1.27	0.2657
X11	0.04754	0.02272	15.40074	4.38	0.0412
F1	0.33842	0.13847	21.01726	5.97	0.0179

^aA strong correlation between Overall Engagement and Student's Experience in the CoL, when regressed on the No. of Faculty Activities, is statistically significant as indicated by a p value of less than .05.

No correlation between persistence and the independent variables was noted. Bartlett's Test of Sphericity indicates a satisfactory score to reject the null hypotheses (significance = .000).

Chi-square distributions of demographic data among first-generation students in the retention program who persisted from the first to the second year of study and those who did not were compared to examine differences. Next, MANCOVA analyses were conducted to test whether first-generation college students in the programs who were mentored were more likely to persist than those who were not mentored or who spent less time engaged in activities with their mentors. The covariate for the MANCOVA examining differences in FGS in the program was an individual item assessing persistence (retention). MANCOVA was performed on the full model (Q6 as covariate), but revealed no statistically significant results. Some of the combination categories had only one count (variance = 0), so Type IV SS was used.

Exploratory factor analysis was performed to determine the dimensionality of the scales used in this research. In order to eliminate reaction among the factors used in the factor analysis, a rotated factor matrix was introduced to the study. Reliability analysis of each factor was completed and while those deemed unreliable were removed from the analysis, the remaining factors were grouped. The subitems for each question were too complex to delineate into separate factors. For example, Q1, which asks subjects to report on institutional experiences, is derived from 13 subitems that have low correlation with other subitems. Thus, the results dictated that the researcher maintained observation and analysis at the level of the 19 main items of the survey. Box's test of equality of covariance matrices was used to test the null hypothesis that the observed matrices of the dependent variables are equal across groups.

Correlation coefficients were computed among the items. A p value of less than .05 was required for significance. The correlations of persistence (as a single factor) with the other measures tended to be lower and not significant. In general, the results suggest that the number of faculty/student activities (F1) is significantly correlated with overall engagement, and the relationship between engagement and integration through CoL is positively correlated, as well. There was a statistically significant relationship observed between students' perceptions of the value of the mentor relationship (Q12) and students' perceptions of the program emphasis (Q10), and between perceptions of the value of the mentor relationship and the types of activities experienced with the peer mentor (Q2b-Q2f). This excluded attendance at athletic events (Q2a). It should be noted that no correlation was observed between the types of activities experienced with the faculty mentor and the perceptions of the value of the mentor relationship.

Table 4.13

Correlation Between Engagement & Student's Perceptions About Mentor Experiences

		Factor
Factor	Statistic	Student Perception of Program
Engagement (Q12Sum)	Pearson Correlation	0.507
	Prob > r under H0: Rho=0	<.000
	N	57

The independent variable, upper to lower level integration through CoL, was measured with one item (Q11) asking participants about the extent to which their experience in the CoL activities contributed to their knowledge, skills, and personal development in 16 core areas. Respondents were provided with a four-option, closed-ended response scale to measure the

degree to which they believed the CoL experience contributed to their growth and skill acquisition. On all 16 subitems, over half the respondents reported that the CoL contributed *very much* or *quite a bit*.

Table 4.14

Correlation Between Experience in the CoL & Students' Perceptions of the Program

Factor	Statistic	Factor
		Experience in the CoL
Student Engagement	Pearson Correlation	0.298
	Prob > r under H0: Rho=0	0.019
	N	61

Results indicate significant relationships between engagement and experience in the CoL (Q11), and between the experience in the CoL (Q11) and students' perceptions of the program emphasis (Q10); correspondingly, there is a significant relationship between students' perceptions of the value of the mentor relationship (Q12) and the experience in the CoL (Q11). There was also a significant relationship between the level of student engagement and the combination of experience in the CoL (Q11) and the number of faculty-student interactions (F1). Additionally the vast majority of students reported that they had completed or planned to complete practicum, internship, (68/70), engage in community service (65/69), work on research with faculty (47/68), or join a sorority (50/70).

Table 4.15

Correlation Between Experience in the CoL & Students' Perceptions of the Program

Factor	Statistic	Factor
		Student Perception of Program
Experience in the CoL	Pearson Correlation	0.280
	Prob > r under H0: Rho=0	.028
	N	61

The independent variable, formal faculty mentorship, was measured with four items (Q2, Q8f, Q9, Q12) asking participants to report the type and frequency of their interactions with their faculty mentor and the quality of the faculty mentor/student relationship. Q2 presented respondents with six specific interpersonal activities by which to measure the amount and level of engagement with the peer mentor. Q8f asked for a report of the number of hours spent in these activities.

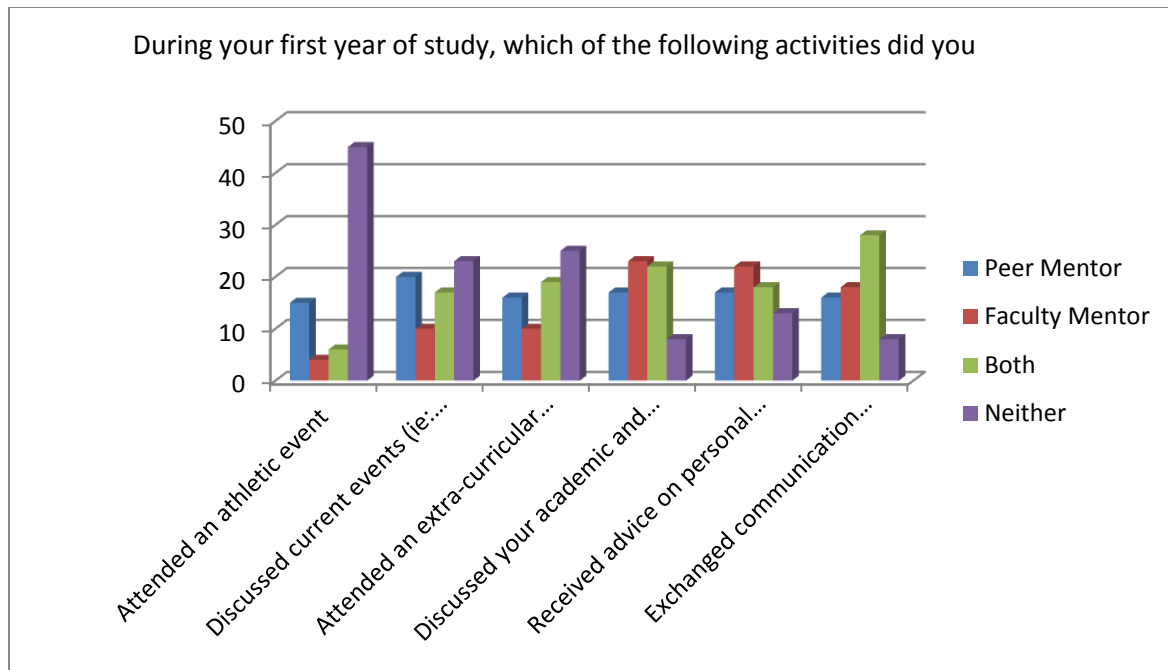


Figure 4.1. Student-Mentor activities (both faculty and peer) are presented with respondents indicating the rate at which these activities occurred within their first year of study.

To assess the quality of the relationship (Q9), respondents were given a Likert-based scale ranging from 0 (“unfriendly, unsupportive, sense of alienation”) to 7 (“friendly, supportive, sense of belonging”). Faculty mentor relationship quality was given a mean score of 4.9 on a 7-point scale by respondents as demonstrated in Figure 4.2.

Students were also asked to report on the extent to which their relationship with the faculty mentor has contributed to their knowledge, skills, and personal development in 16 key areas (Q12). Figure 4.3 shows the distribution of responses for mentor/mentee interactions.

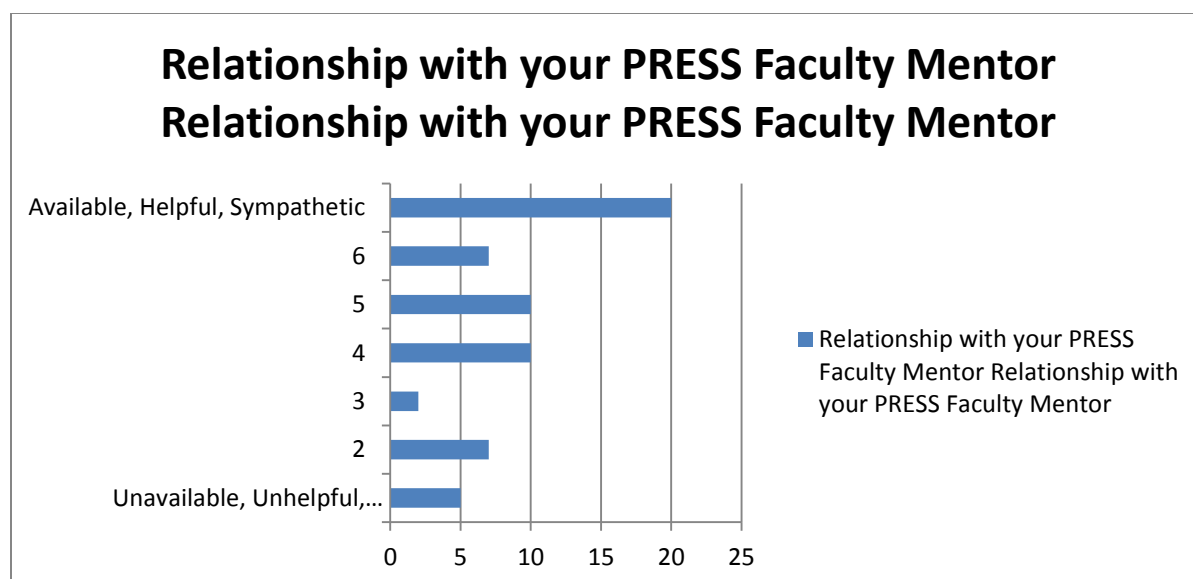


Figure 4.2. Quality of student-faculty mentor relationship.

Surprisingly, the majority of respondents indicated that they spend no time with their faculty mentor during a typical 7-hour week outside the mandatory PRESS required activities. However, answers to Q2 indicate that despite this acknowledgement, students reported having attended athletic events (13%), discussed current events (39%), attended an extracurricular activity (80%), discussed goals with (64%), and received advice from (54%) their faculty mentor. This apparent discrepancy is discussed further in Chapter 5.

The independent variable, formal peer mentorship, was measured with four items (Q2, Q5, Q8g, Q12) asking participants to report the type and frequency of their interactions with their faculty mentor and the quality of the faculty mentor/student relationship. Q2 presented respondents with six specific interpersonal activities by which to measure the amount and level of engagement with the peer mentor. On average, most students reported having discussed personal and career-related concerns, attended an extracurricular event, and discussed current events with their peer mentor. Q8g asked for a report of the number of hours spent in these

activities. Figure 4.4 shows that students engaged in a relatively low number of activities aside from the required PRESS sessions.

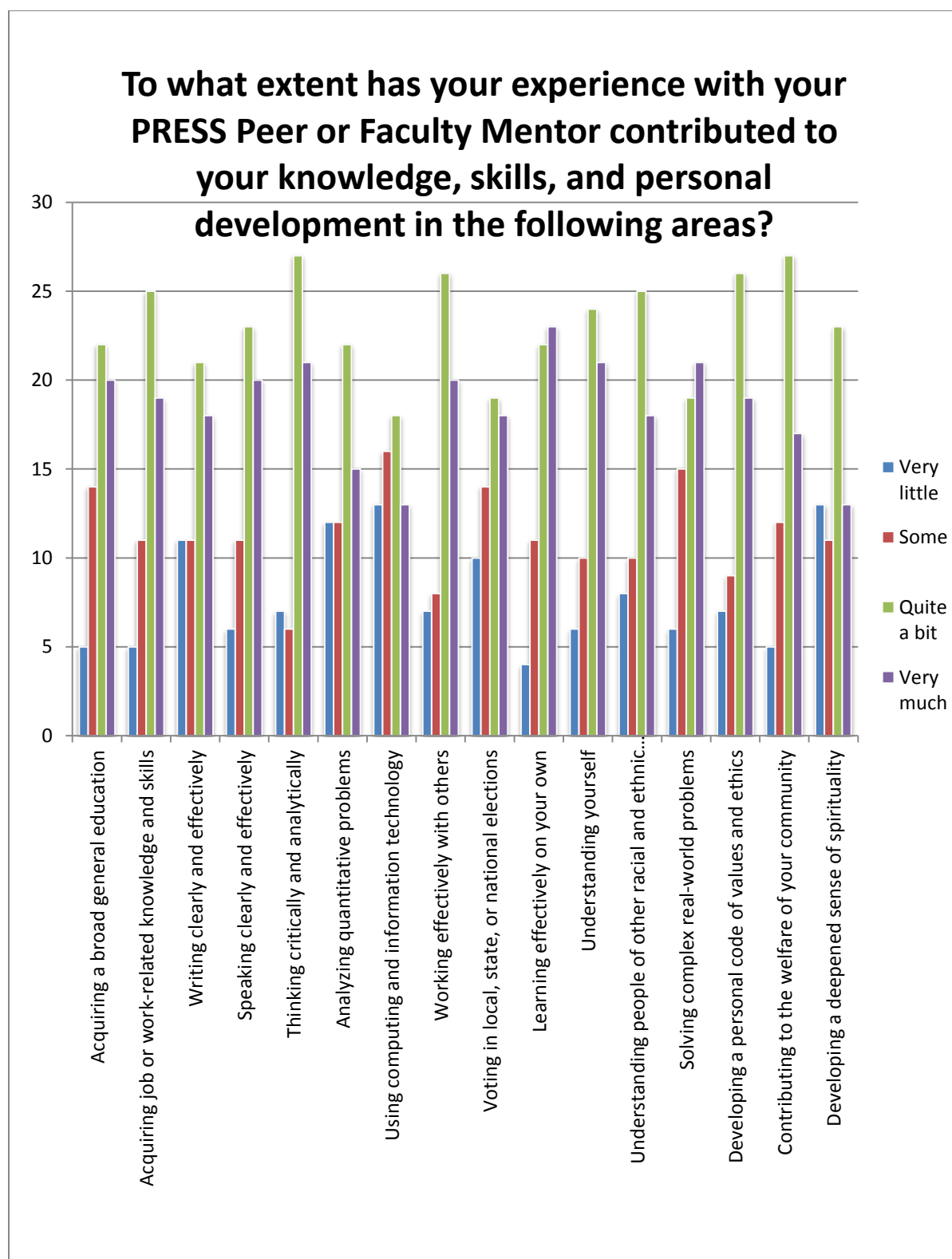


Figure 4.3. Faculty Mentorship's effect on student's growth and development.

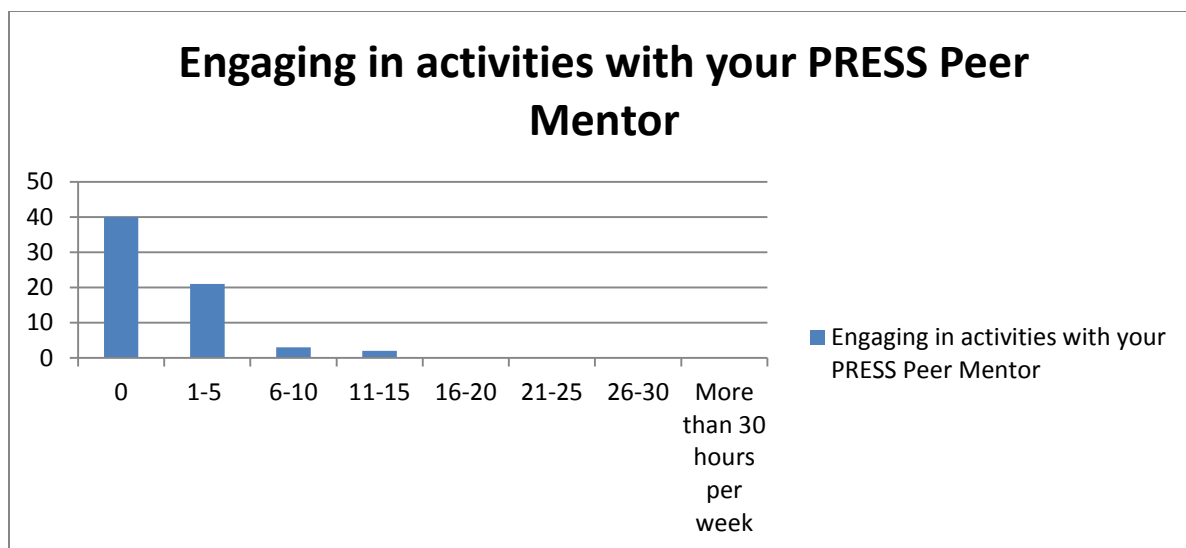


Figure 4.4. Measures of the number of engaging activities, outside the required PRESS activities, completed with peer mentor on a weekly basis.

Survey item Q12 asked for a self-report of the correlation between the peer mentor/mentee relationship and the students' knowledge, skill, and development. To assess the quality of the relationship (Q9), respondents were given a Likert-based scale ranging from 0 ("unfriendly, unsupportive, sense of alienation") to 7 ("friendly, supportive, sense of belonging"). The quality of the peer mentor relationship was given a mean score of 5 on a 7-point scale; 41 of 66 respondents rated their mentors with a score of 5 or better. Similar to the findings for the frequency of engagement with faculty mentors, however, over half the respondents indicated (Q8g) that they spend no time with their peer mentor during a typical 7-hour week in addition to the required PRESS activities. Similar to the findings for faculty mentor relationship quality, answers to Q2, in Figure 4.1, indicate that despite this acknowledgement, students reported having attended athletic events (30%), discussed current events (53%), attended an extra-curricular activity (50%), discussed goals with (56%), and received advice from (50%) their mentor.

The dependent variable, the level of student engagement, was measured with 3 items (Q3, Q4, Q8d) asking participants to report on the frequency of their participation in activities such as interacting with diverse colleagues, attending extracurricular events, volunteering, and joining student organizations. Respondents were provided with 17 subitems, which included closed-ended responses from *very often* to *never*, *done* to *have not decided*, and *number of hours*.

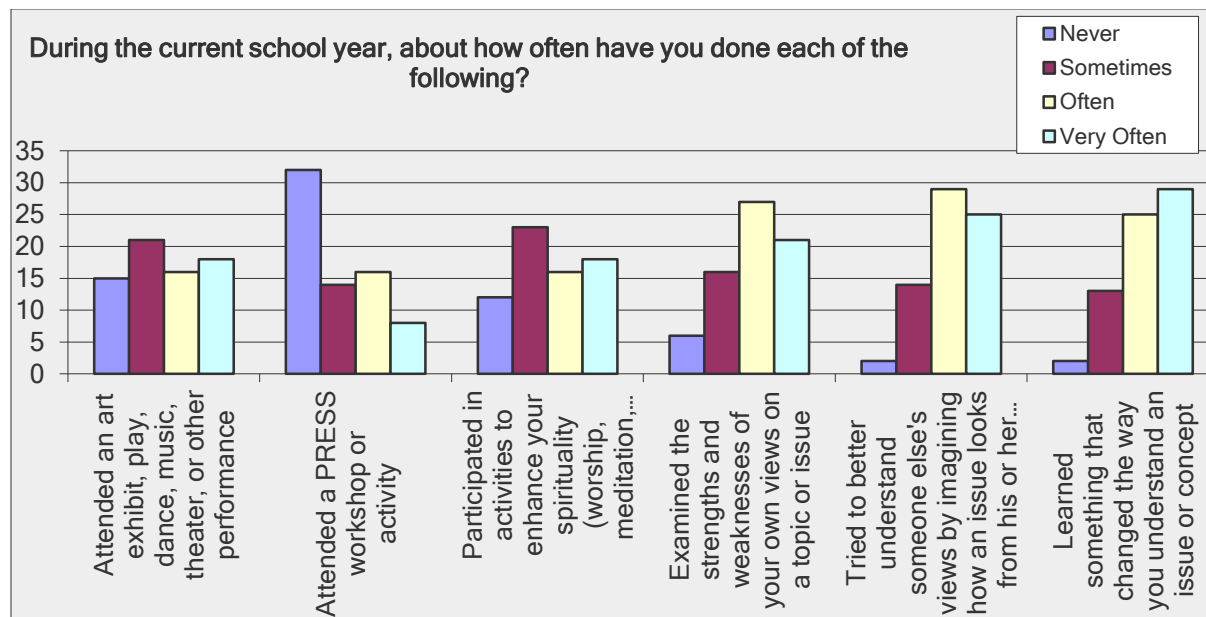


Figure 4.5. Number of student engagement activities experienced by respondents on a *never*, *sometimes*, *often*, or *very often* basis.

For these items, the majority of students (64%) reported spending between 1 and 10 hours per week on co-curricular activities (Q8), indicating at least some level of engagement; 44% spent more than 6 hours per week in these activities. The majority of respondents participated in co-curricular events *sometimes*, *often*, or *very often*, and intentionally engaged in activities that contributed to their personal development.

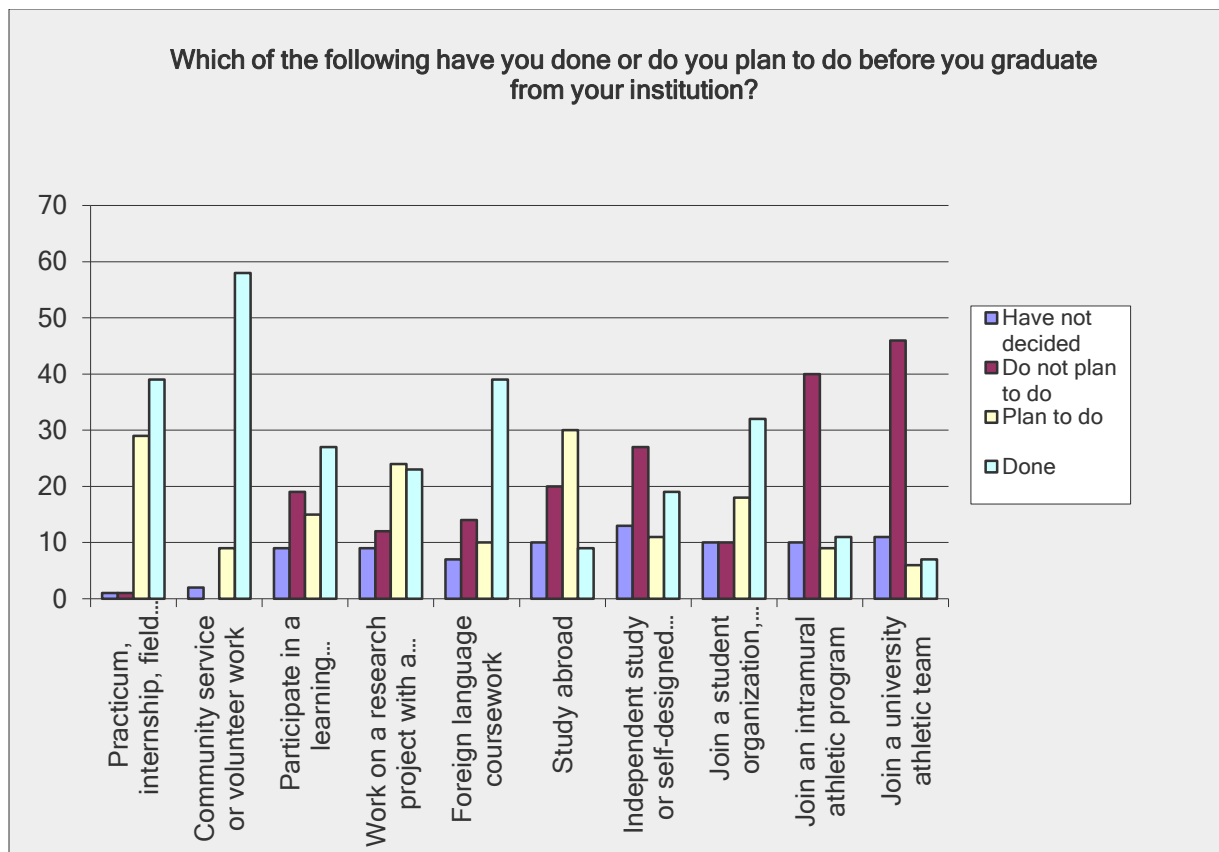


Figure 4.6. Number of student engagement activities experienced by respondents on a *never*, *sometimes*, *often*, or *very often* basis.

The dependent variable, first-to-second year persistence, was measured with two items (Q6, Q7) asking participants to report on their continuous enrollment and the rationale for their persistence decisions. Respondents were provided with two sets of closed-ended responses; the first asked whether they had been continuously enrolled, and the second asked for the reason for their stop-out, transfer, or withdrawal decision.

For these items the overwhelming majority of students (87.88%) reported continuous enrollment from the first-to-second year of study at the institution, and only 6% of those who did not persist attributed their decision to academic hardship.

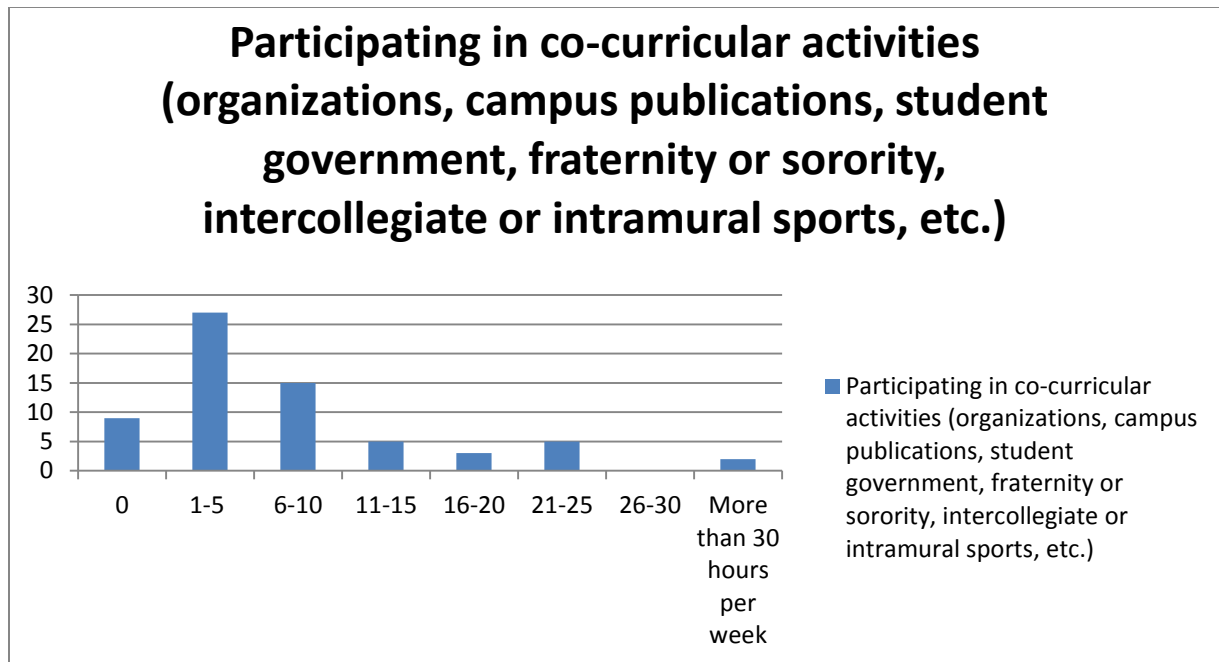


Figure 4.7. Frequency of respondent participation in co-curricular activities in hours per week.

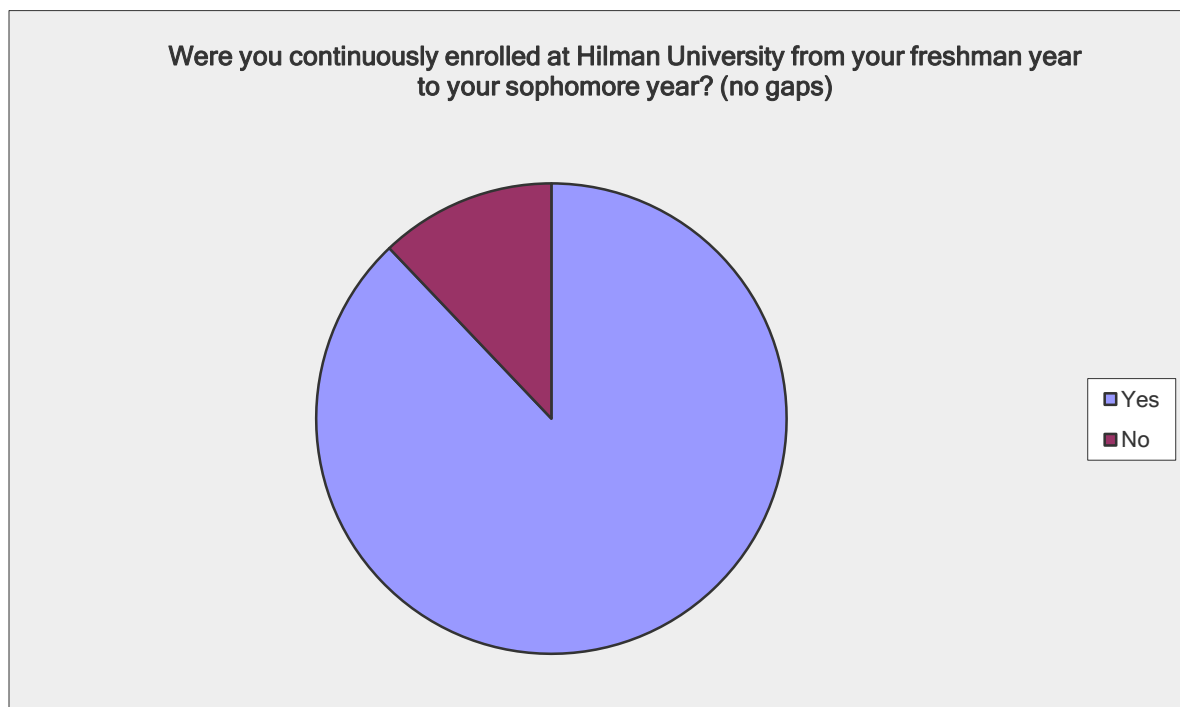


Figure 4.8. Describes respondent's continuous enrollment between their freshman and sophomore years.

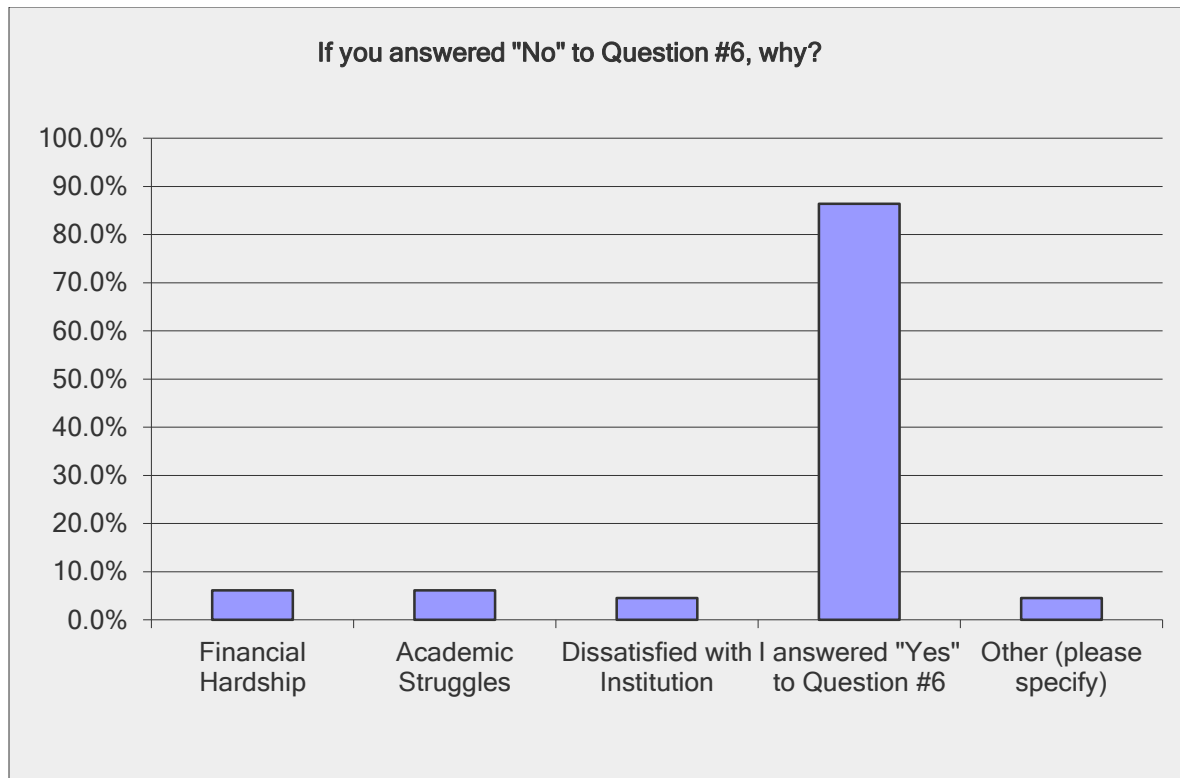


Figure 4.9. Reasons for respondents' discontinuing enrollment during their freshman and sophomore years.

Research Question 1

The first question examined in this research was whether the classroom integration of first-year and matriculating students in Communities of Learning has an impact on the first-to-second year retention of first-generation students. Chi-square distributions of demographic data among FGS who persisted from the first to the second year of study and those who did not were compared to examine differences. Finally Pearson's Rho indicated a weak correlation between the two variables ($p=.90$). Although the findings superficially confirm the null hypothesis, relationships among other variables indicate that the CoL may act as a moderating variable that leads to increased engagement. Such engagement improves students' experiences, organically leading to positive persistence decisions.

Research Question 2

The second relationship under investigation was the impact of classroom integration of first-year and matriculating students in CoL on the level of engagement of first-generation students. The findings are presented in Table 4.14. MANCOVA analyses were performed to test whether FGS who demonstrated high levels of activity demonstrated higher levels of student engagement. MANCOVA was performed on the full model, but revealed no statistically significant results. Pearson's Rho indicated a strong correlation between the two variables ($p=.019$). The first cross-tabulation confirms the relationship between CoL participation and engagement in co-curricular and extracurricular activities as both positive and statistically significant.

Among the core areas students reported as most highly correlated with their CoL experience were thinking critically and analytically (over 90% linked their interactions with their CoL to this skill/ability), working effectively with others (92%), learning effectively on your own (90%), understanding yourself (82%), and understanding people of other backgrounds (90%). Additionally, more than 75% of all respondents acknowledged that the CoL also aided them in acquiring all the skills on the questionnaire.

Research Question 3

The third research question investigated whether there is a difference in the first-to-second year retention of first-generation students who are formally mentored by faculty when compared with those who are not. Chi-square distributions of demographic data among FGS who persisted from the first to the second year of study and those who did not were compared to examine differences. MANCOVA analyses were performed to test whether FGS who were mentored were more likely to persist than those who were not mentored or who spent less time

engaged in activities with their mentors. The covariate for the MANCOVA examining differences in FGS in the program was an individual item assessing persistence (retention). MANCOVA was performed on the full model (Q6 as covariate), but revealed no statistically significant results. Pearson's Rho indicated a weak correlation between the two variables ($p=.163$). The findings are presented in Table 4.16.

Table 4.16

Correlation Between Persistence & Faculty Mentorship

		Factor
Factor	Statistic	Faculty Mentorship
Persistence	Pearson Correlation	-0.174
	Prob > r under H0: Rho=0	0.163
	N	66

The first cross-tabulation shows a nonsignificant relationship between participation in the faculty mentorship and first-to-second year retention. Although this superficially confirms the null hypothesis, relationships among other variables indicate that mentorship may act as a moderating variable that leads to increased engagement. Such engagement improves students' experiences, organically leading to positive persistence decisions.

Research Question 4

The study also examined whether there is a difference in the level of engagement of first-generation students who are formally mentored by faculty when compared with those who are not. MANCOVA analyses were performed to test whether FGS who demonstrated high levels of activity demonstrated higher levels of student engagement. A multiple regression analysis

revealed a strong correlation between the two variables ($p=.046$). The findings presented in Table 4.10 confirm a significant positive relationship between engagement and the number and quality of activities with faculty mentors. First, the results illustrate that students with the highest levels of engagement are more likely to have participated in activities with faculty mentors during their first year of study. Additionally, these students are also more likely to rate their faculty mentor as *available*, *helpful*, and *sympathetic*. The results reveal that students with the strongest perception of the quality of their relationship with their faculty mentor had the greatest levels of engagement. It is surprising, however, that more than 50% of respondents acknowledged that they did not spend an extensive amount of time with their faculty mentors outside the required PRESS activities; yet these students pointed out specific benefits they had gained from the mentor/mentee relationship. Table 4.3 illustrates the contribution of the mentor/mentee relationship.

Research Question 5

Further, this study sought to assess whether there is a difference in the first-to-second year retention of first-generation students who are formally mentored by peers when compared with those who are not. No evidence was produced to support the hypothesis that students who are mentored by peers persist at a higher rate than those who are not. MANCOVA analyses were performed to test whether FGS who were mentored were more likely to persist than those who were not mentored or who spent less time engaged in activities with their mentors. The covariate for the MANCOVA examining differences in FGS in the program was an individual item assessing persistence (retention). MANCOVA was performed on the full model (Q6 as covariate), but revealed no statistically significant results. Chi-square distributions of demographic data among FGS who persisted from the first to the second year of study and those

who did not were compared to examine differences. Finally Pearson's Rho indicated a weak correlation between the two variables ($p=.86$). Although the findings superficially confirm the null hypothesis, relationships among other variables indicate that the CoL may act as a moderating variable that leads to increased engagement. Such engagement improves students' experiences, organically leading to positive persistence decisions.

Research Question 6

The final question under study explored whether there is a difference in the level of engagement of first-generation students who are formally mentored by peers when compared with those who are not. MANCOVA was performed on the full model, but revealed no statistically significant results. Pearson's Rho indicated a strong correlation between the two variables ($p=.043$).

Table 4.17

Correlation Between Engagement & Peer Mentorship

		Factor
		Peer Mentorship
Factor	Statistic	
Engagement	Pearson Correlation	0.268
	Prob > r under H0: Rho=0	0.043
	N	66

The findings presented in Table 4.17 confirms a significant positive relationship between engagement and the number and quality of activities with peer mentors. First, the results illustrate that students with the highest levels of engagement are more likely to have participated in activities with peer mentors during their first year of study. Additionally, these students are

also more likely to rate their peer mentor as *available*, *helpful*, and *sympathetic*. The results reveal that students with the strongest perception of the quality of their relationship with their peer mentor had the greatest levels of engagement.

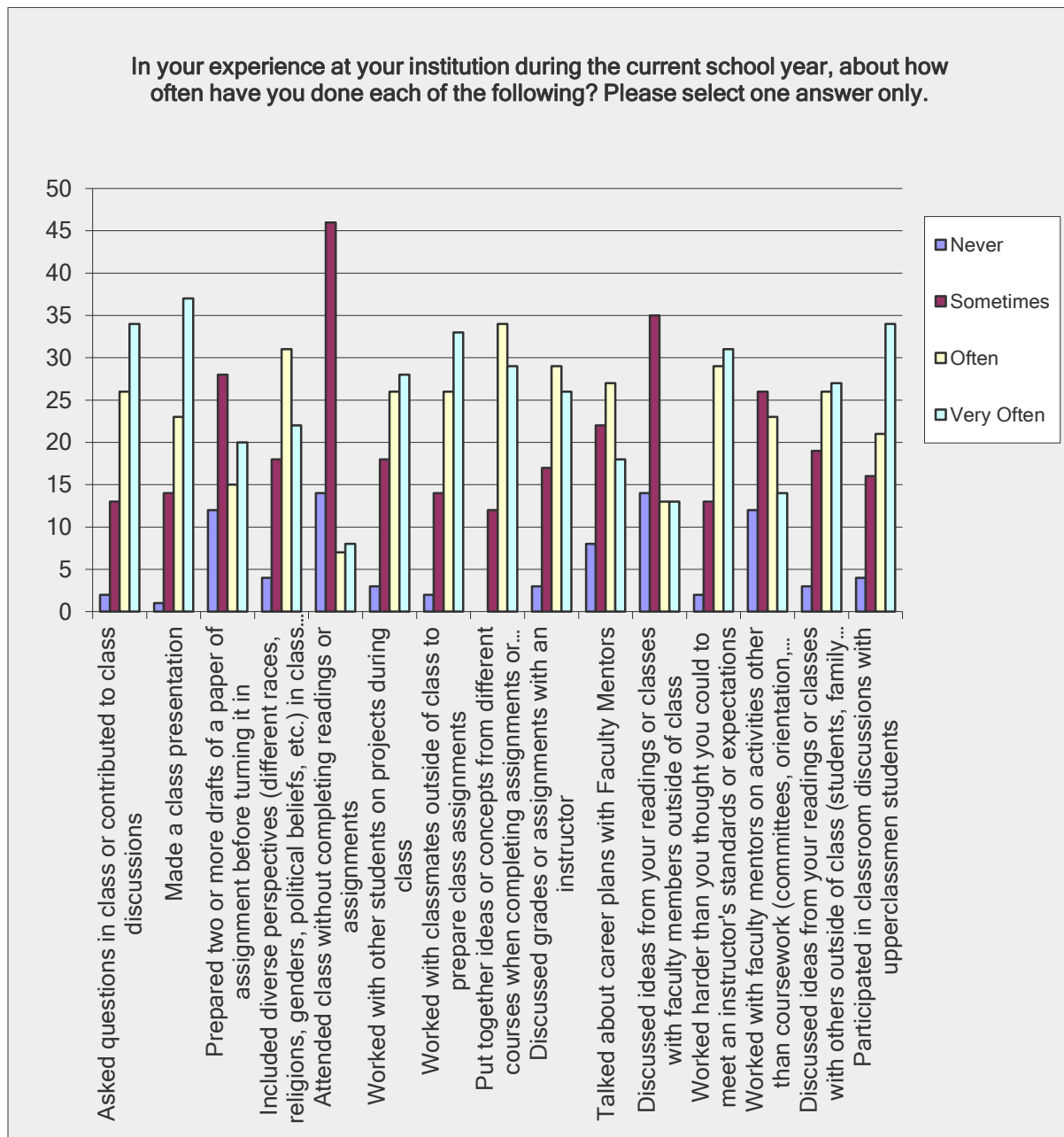


Figure 4.10. Frequency of primary engagement activities.

Using multivariate regression, this study also examined how faculty mentorship, peer mentorship, and engagement jointly affect persistence. The analysis confirmed the results of the initial correlations, indicating a strong and significant positive relationship between student engagement and the frequency and quality of student/peer mentor interaction. This finding was mirrored in the relationship between faculty mentorship and the level of engagement. The results indicate that students with the highest levels of engagement are more likely to have participated in activities with peer and faculty mentors and to have participated in additional engagement activities in the CoL. Although none of the independent variables were correlated with persistence or retention, the quality and frequency of interaction with faculty and peer mentors, as well as participation in the CoL were positively linked to students' propensity for increasing their own engagement over time.

CHAPTER FIVE: DISCUSSION

Summary of Findings

Identifying effective retention and engagement practices in institutions of higher education has been directly linked to increased achievement, success, and completion (Noel-Levitz, 2011; Johnson et al., 2008). Advances in retention and success outcomes for FGS will result in lower drop-out rates, decreased stop-out behavior, greater student engagement, and more timely degree completion.

In this study, comparisons of persisters and nonpersisters who participated in the retention program were analyzed. The research yielded four main findings. First, the data demonstrates that FGS persistence in this study was not significantly correlated with participation in the CoL nor to mentorship. Second, although the program components were not independently significant factors that impacted persistence, evidence suggests that all three of these variables act as mediators and moderators to encourage engagement, which may, indeed lead to increased persistence. Third, the regression analyses presented in Chapter Four indicates that first-generation college students who participated in quality mentorship relationships and did so in the context of learning communities were more likely to engage in extracurricular and co-curricular activities that will improve their chances of success. They were significantly more likely to engage in academic, interpersonal, and social activities than first-generation college students who did not participate in such activities or participated at a very low level. First-generation PRESS students had a statistically significant higher mean score on perceptions of the value or contribution of the mentor/mentee relationship, as well. This indicates that students who use the mentor more readily and frequently also have a greater context for understanding the

value of the relationship. The results indicate that students with the highest levels of engagement (Q3, Q4, Q8d) have the highest rate of sustained quality relationships with their faculty and peer mentors.

Discussion of Findings

As anticipated, students who were most engaged also reported having positive mentor/mentee relationships and consistent participation in program activities. More than half of the student respondents rated their faculty and peer mentors as *available*, *helpful*, and *sympathetic*, with an average rating of 4.9 for faculty mentors and 5.2 for peer mentors on a 7-point Likert scale. Although 69% of students strongly agreed with these characterizations, the mean rating was 5.4. This indicates that although students found the mentor-mentee relationship valuable, there is still great opportunity to improve the quality of such relationships, especially between faculty and students. This may be especially crucial at institutions like Hilman, which boasts a 10:1 student/faculty ratio. Institutions may capitalize on this finding by placing faculty advisors and liaisons at the core of the support structures built for student activities and other extracurricular opportunities for engagement.

Of those students who reported engaging in PRESS program activities, many cited spending approximately 1-5 hours per week with their faculty mentor and 1-5 hours per week with their peer mentor. This is not surprising, as the minimum amount of time required of mentors in the program is 1-2 hours weekly. Almost 10% reported spending 6-15 hours engaged in these mentorship meetings; further, 44% engaged in additional activities with other PRESS staff who served in mentorship roles. Most surprisingly, the majority of respondents reported spending no time with their mentor outside of the mandatory monthly PRESS activities, which required attendance of mentors and mentees. This finding may have also been offset by the

existence of PRESS staff (faculty and administrators) who served in an informal mentorship capacity. Data on this interaction were not collected. These results provide evidence that requiring students to attend mentorship and/or retention activities may positively impact first-year FGS. As a result of participating in formal mentorship activities, FGS experienced a significant increase in their engagement, but only when the mentor/mentee relationship was valued by the student and when the student viewed the mentor as *helpful* or *sympathetic*, providing evidence that requiring mentorship and/or retention activities may positively influence the success of the relationship (Pascarella et al., 2004).

The rate of first-to-second year persistence for the respondents was 87.88%, a significant contrast to the program's overall 96% retention rate for Cohort I and II. Missing data for the questionnaire item regarding persistence (13% of respondents) may have skewed this finding due to the small sample size used in this study. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was used to ensure that the small sample size would not endanger the reliability of the study. Size notwithstanding, it is noteworthy that the program's retention rate was still higher than the institution's reported 77.3% rate of overall freshman retention (U.S. News and World Report, 2014). For those students who did not persist through continuous enrollment at Hilman university from their first-to-second years of study, financial hardship (6%), academic difficulty (6%), and institutional dissatisfaction (4.5%) were among the most cited explanations. This reveals a marked difference in the cohorts under study and subsets of FGS identified in previous research. Most scholars have insisted that FGS are less likely to persist than CGS. Hence, it appears that when FGS are provided with targeted retention strategies in a systemic set of practices reinforced by the institution, they may be as likely, or

even more likely, than CGS to persist, barring financial hardship or dissatisfaction with the institution.

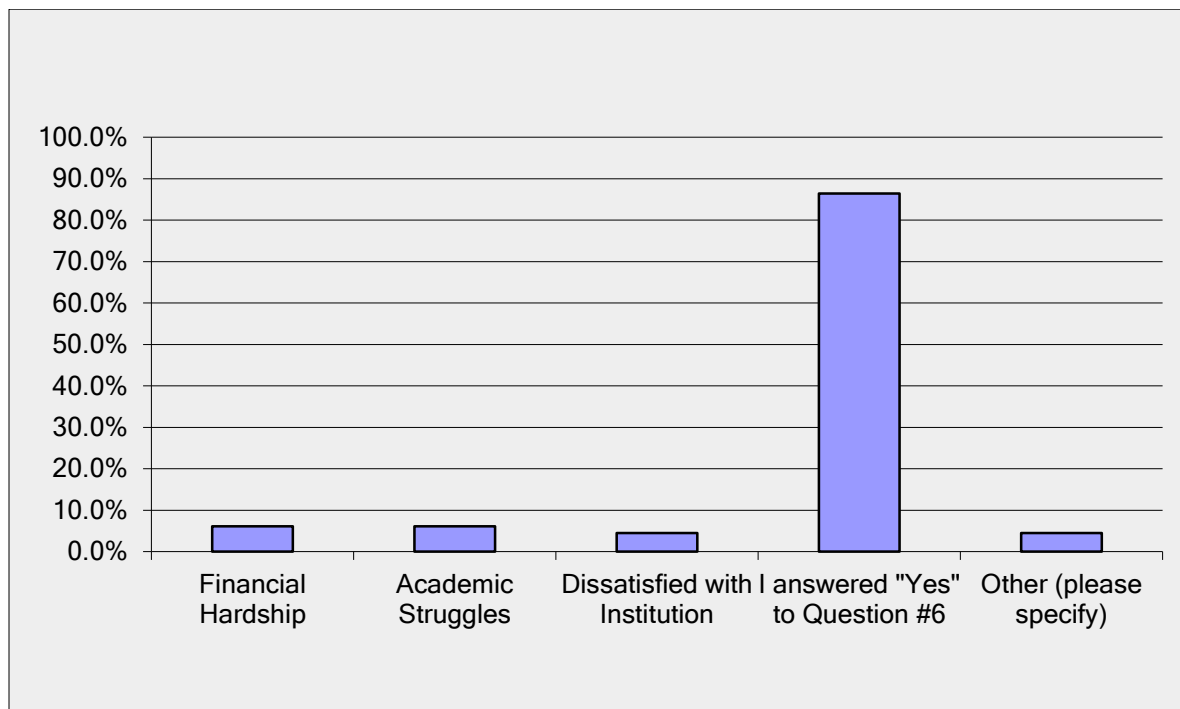


Figure 5.11. Self-reported reasons for stop-out, drop-out, and transfer decisions.

Limitations

The limitations of this study were perpetuated by five main sources: the use of a small sample size with limited generalizability, the instrumentation used, potential confounding due to the variance of student experiences, the personal and academic characteristics of students enrolled in the program, and the significant effects participation in a CoL has on student learning. This research operated under the assumption that the administration of the survey did not have any significant impact on respondents' self-reports and that nonrespondents did not significantly differ from respondents. Finally, the findings of this work are reported under the assumption that human error in the analysis of the data did not occur.

This study was delimited to examining the persistence and engagement behaviors of FGS at a small (fewer than 6,000 students), four-year, private, residential HBCU. Scholars have reached a consensus in their assessment of students at minority-serving institutions, describing them as unique from other populations of students (Cook & Cordova, 2006; Grier-Reed et al., 2008) in demography, specific motivation to attend such colleges and universities, and familial background. For example, the cost of tuition at Hilman, including room and board, is approximately \$30,000. This fee structure (along with the institution's level of selectivity) acts as an organic determinant of the demographic and socio-economic character of the students who are enrolled. Of the 66.8% of students at Hilman who apply for financial assistance, aid is provided for roughly half, and an average of 43% of the need is met. Students admitted to the PRESS program are atypical of the rest of the student body at Hilman in that they are FGS, usually from low SES households, and almost wholly recipients of financial aid. These demographic data place HBCU students in a distinct socioeconomic context.

MSIs have also been characterized by themselves and others as providing a more intimate, race- or ethnicity-specific, and nurturing collegiate culture than predominantly white institutions (PWIs). The institution, set in an urban region, boasts a small faculty-student ratio of 10:1 and an average freshman retention rate of 77.3%; nearly 60% of its classes have fewer than 20 students (U.S. News and World Report, 2013). As a result of these definitive and salient differences between HBCUs and other types of institutions, the results of studies on HBCUs and the students they serve must be interpreted carefully and applied specifically. Thus, the generalizability of findings to the persistence and engagement behaviors of students at other types of institutions may be weak to moderate. Because the study relied on self-selection (students voluntarily enrolled or declined to enroll in the retention program), inherent participant

characteristics may have also affected the findings. Nonetheless, this study may yield tremendous benefit if replicated in other types of institutions and environments to examine differences between FGS in various settings. Such replication would lend even greater utility to the findings of the current study.

The instrumentation used in this research also lends potential challenges to the validity and reliability of the findings. Of primary concern in using the NSSE-adapted instrument was the self-reporting format of the questionnaire. The researcher relied on an assumption that students would answer the questionnaire items carefully and honestly. To eliminate the threats that may have resulted from the time and location of mentorship activities, a cross-section of events and activities was used for investigation. The survey instrument contains no precollege measure of students' receptiveness to educational experiences, so self-reported gains on outcomes have questionable predictive validity. Historically, concerns have also existed about issues of validity surrounding the use of survey research, such as the use of students' self-reporting about experiences across extended periods of time (Porter, 2011). Additionally, some findings suggest that students of higher ability report academic measures more accurately than lower ability students (Cole & Gonyea, 2010; Kuncel, Crede, & Thomas, 2005). Institutional size and the variance of student experiences within and between institutional sectors and types may also limit the reliability of the instrument used here. However, despite differing opinions on the utility and validity of this type of methodology, the use of questionnaires as a method to measure engagement is widely accepted as rigorous and useful. McCormick (2011) and others (Kuh, 2004; Cole & Korkmaz, 2011; Nelson Laird et al., 2009) agree that reliance on self-reports does not profoundly limit the utility of the data. In fact, Kuh (2004) argues that "indicators of

educational practice, such as how students use their time, [in] student reports are often the *only* meaningful source of data” (p. 3).

Hu and Kuh (2002) and Kuh (2004) suggest the following criteria as a basis for accepting self-reported data as valid:

1. The information requested is known to the respondents,
2. The questions are phrased clearly and unambiguously
3. The questions refer to recent activities ,
4. The respondents think the questions merit a serious and thoughtful response, and
5. Answering the questions does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to respond in socially desirable ways. (Hu & Kuh, 2002, p. 557)

The questionnaire used in this study satisfied all these conditions. Most items on the engagement questionnaire used in the current study were modeled after established and validated instruments including the College Student Experience Questionnaire (CSEQ) and the NSSE, which have undergone psychometric analysis and have been field tested using a sample of more than 36,000 students from 68 4-year colleges (Ouimet et al., 2001; Kuh, 2004).

The prominent variance of student experiences was the strongest limitation in the research environment. Although the retention program offered multiple opportunities for engagement, integration, and mentorship, there is no way to know participants’ level of exposure to additional or similar activities external to the program, in contexts such as fraternities, organizations, academic departments, and informal mentorship relationships. The program also had intrinsic confounders such as the existence of PRESS staff who also served in an informal mentorship capacity, apart from the students’ primary faculty or peer mentor. Efforts were made

to control for this as much as possible through careful wording of the questionnaire items, which were aimed at reflecting *levels* of participation in a formal, institutionally supported relationship. This was particularly salient in responses that revealed extensive interaction with the PRESS staff. In future research, however, this variability may be avoided by conducting experimental research. This study did not include a pretest to analyze differences in the individual characteristics among first-generation respondents. Such an analysis would have illuminated statistically significant differences among the persisters and the nonpersisters in the sample. This, in turn, would have controlled for the effect of confounding variables such as motivation, personality, and commitment to college completion.

As noted in the previous chapter, this research used Cronbach's Alpha Reliability Coefficient to factor out items on the questionnaire that reduced the internal consistency. Using this method of reliability analysis, the researcher established a reasonable case for removing some questions from the overall analysis and/or creating subcategories for particular groups of them. As each of these items was removed, there was a significant increase in the correlation of the remaining items.

Notably, researchers must consider the confounding effects of students' personal characteristics as well as the influence of peer groups. First, it cannot be known for certain whether the variables under study may be considered causative or reciprocal factors. Second, the student outcomes reported may have resulted from participation in formal mentorship and/or integration activities that were external to the PRESS program. The cross-sectional nature of this study perpetuated other confounding variables including SAT score, gender, Greek life, athletics and other extracurricular activities, independent study projects, high school grades, socioeconomic status, friendships, and substance use/abuse. Moreover, although this study

examined the effects of multiple measures of student engagement in college, it did not include variables to measure the effects of students' academic major or summer academic experiences on persistence and engagement. For example, in a highly rigorous or practicum-oriented academic discipline, a student may be more likely to receive additional departmental mentorship. Although the evidence that these factors have significant impact on persistence has been inconsistent (Pascarella & Terenzini, 2005), conclusions drawn here relied upon the randomization of respondents to offset potential confounding effects of participation in summer activities, personality traits, differences in academic majors, gender, Greek life, athletics and other extracurricular activities, independent study projects, high school grades, socioeconomic status, friendships, and substance use/abuse.

Fourth, demographic or other personal characteristics such as high levels of motivation or internal locus of control may have impacted student outcomes as well (Hicks, 2005). Maturation effects may also act a confounder, since students' natural emotional and intellectual development between the first and second year of study also may have resulted in selection-maturation effects, which may have acted as a threat to the internal validity of this study. These limitations are consistent with those in previous research on this topic.

Finally, the findings here concur with previous research that suggests experiencing college as a part of a CoL is strongly correlated with active and collaborative learning and interaction with faculty (Zhao & Kuh, 2004). Tinto's (1980, 1987, 1993) explain the integration of Communities of Learning (CoL) as key to bridging the academic-social success and increase student retention. These learning communities merge peer and faculty mentorship with linked or clustered courses enrolling a common cohort of students each academic year. On many campuses, students are co-enrolled in two general education courses, one first-year seminar and a

host of extracurricular activities designed to improve engagement and cohesion among members of the cohort. The value of this network-oriented experience is reemphasized by the findings of the current study. The basic definitive strategies of the CoL-- residential programs, linked course, interdisciplinary team-taught programs, student cohorts in existing classes, and the use of paired or clustered courses (Swaner & Brownell, 2008)—appear closely correlated to student engagement and the ease with which students approach engagement opportunities. Although there are multiple approaches to the CoL concept, institutions may benefit from adapting one of these approaches as a retention technique for first or second-year students. Curricular learning communities, for example, which consist of a common theme which links two or more academic courses in which the student is co-enrolled may function most effectively in collegiate environments that focus on liberal arts education. Building from Pickering's work (2008), it is plausible that this type of social integration will also be especially impactful for early-year transfer students. Classroom-based learning communities may improve student success in early-declaration academic disciplines such as engineering or journalism, since they use interactive pedagogy to engage students within the discipline. Alternatively, residential or living-learning communities, which incorporate a shared living space work well on small or mid-size diverse residential campuses, as students take courses based upon a particular demographic or personal profile (Zhao & Kuh, 2004).

Implications

Student engagement evidence may be used in five principal ways: (a) to inform the improvement of programs and policies on college campuses, (b) to increase student learning and development, (c) to document the features of institutional quality related to student learning and experiences (Kuh, 2008), (d) to improve institutional effectiveness in meeting retention and

completion goals, and (e) to improve the accountability and responsibility of institutions by informing targeted approaches to areas of concern.

Until now, relatively few data have been collected on the impact of institutional practices and policies that have the potential to mediate or moderate student behaviors. The current research complements traditional inquiry by providing a contemporary lens through which to view the relationship between institutions and the students they serve. Few studies have explored the experiences of first-generation students, and even fewer have identified specific retention strategies that have proven effective with this unique population of students. This research has focused primarily on illuminating the specific predictors of success, drop-out, and stop-out among identified groups of students and examining the role of first- and second-year interventions in promoting student persistence. The researcher's own models, used to inform the current study, suggest that the traditional paradigm of persistence (Figure 5.12) views student precollege attributes and post-enrollment behaviors as a set of impenetrable core characteristics that combine to produce persistence decisions.

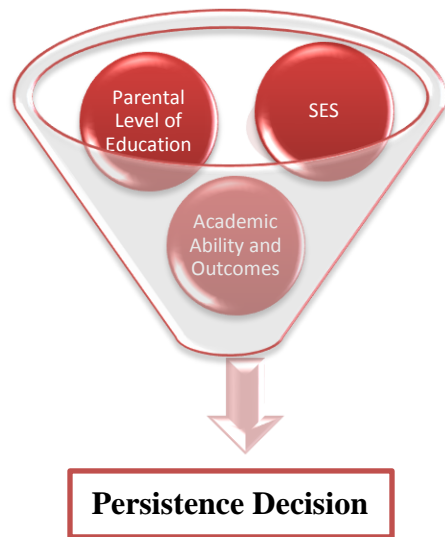


Figure 5.12. Traditional model of persistence decisions and level of engagement (author's own interpretation).

In the proposed model (Figure 5.12), student characteristics funnel into a set of enrollment decisions and behaviors, but are more malleable. Institutional efforts such as CoL, mentorship programs, and first-year living learning experiences act to mediate the effects of many attrition risk factors. More specifically, the independent variables in this study act as moderators for personal and developmental characteristics by creating integrated experiences wherein students may observe model scholarly behavior, receive nurturing and guidance from experienced peers, and interact with faculty in and outside of the classroom setting. Much of the relevant previous research on student engagement and persistence has focused on student behavior and interaction.

Although most institutions regularly monitor their retention and graduation rates (many in response to funding pressure and/ or public mandates), and some even have invested in retention committees and personnel, few have established benchmarks to guide in the development of new programming and organizational structures that support student success.

The current research concurs with the College Board's (2009) suggestion that such benchmarks—"High Impact Practices"—must be both empirically grounded and contextually specific, and provide a reasonable example of these benchmarking practices. Elucidating the strategies that can increase engagement and persistence in high-risk populations is crucial to understanding how institutions can best leverage their fiscal, human, and intellectual capital to best meet the goals of stakeholders at all levels. Pedagogically, this understanding requires a shift in the fundamental focus of research and dialogue surrounding high-risk students and the institutions that serve them. A growing body of evidence suggests that one of the most important ways to achieve this change in focus involves an institutionalized effort to encourage and support students to increase their involvement with high-impact educational practices that have been linked with beneficial outcomes. As noted, while many scholars have asserted that FGS are less likely to persist, when FGS are provided with targeted institutionalized retention strategies, they may be as likely, or even more likely, than CGS to persist and excel. In fact, five of these 10 high impact practices were identified in the variables used in this study: first-year experiences (the PRESS retention program), common intellectual experiences (participation in a learning community), collaborative assignments (through the CoL and monthly PRESS program activities), service learning (a PRESS mandated activity), and undergraduate research (with faculty and/or in the PRESS CoL). If these practices are demonstrated to be pivotal in aiding long-term persistence, this paper posits that the use of such practices as a means of improving persistence is an attractive option as it is sensitive to both institutional constraints and to differences among various types of private and public colleges and universities.

Because individual effort and involvement are critical determinants of college impact (Pascarella & Terenzini, 2005), institutions should focus on the ways they can shape their

academic, interpersonal, and extracurricular offerings to encourage student engagement. Orientation and coaching programs should use a combination of invasive and nonthreatening strategies such as peer mentorship and interactive class sessions to increase overall student engagement. An improvement in the way institutions address the job-related concerns of FGS and an intensive restructuring of financial and advising services (Bozick, 2007; Thayer, 2000) may also yield vast increases in student retention, particularly among those with low SES.

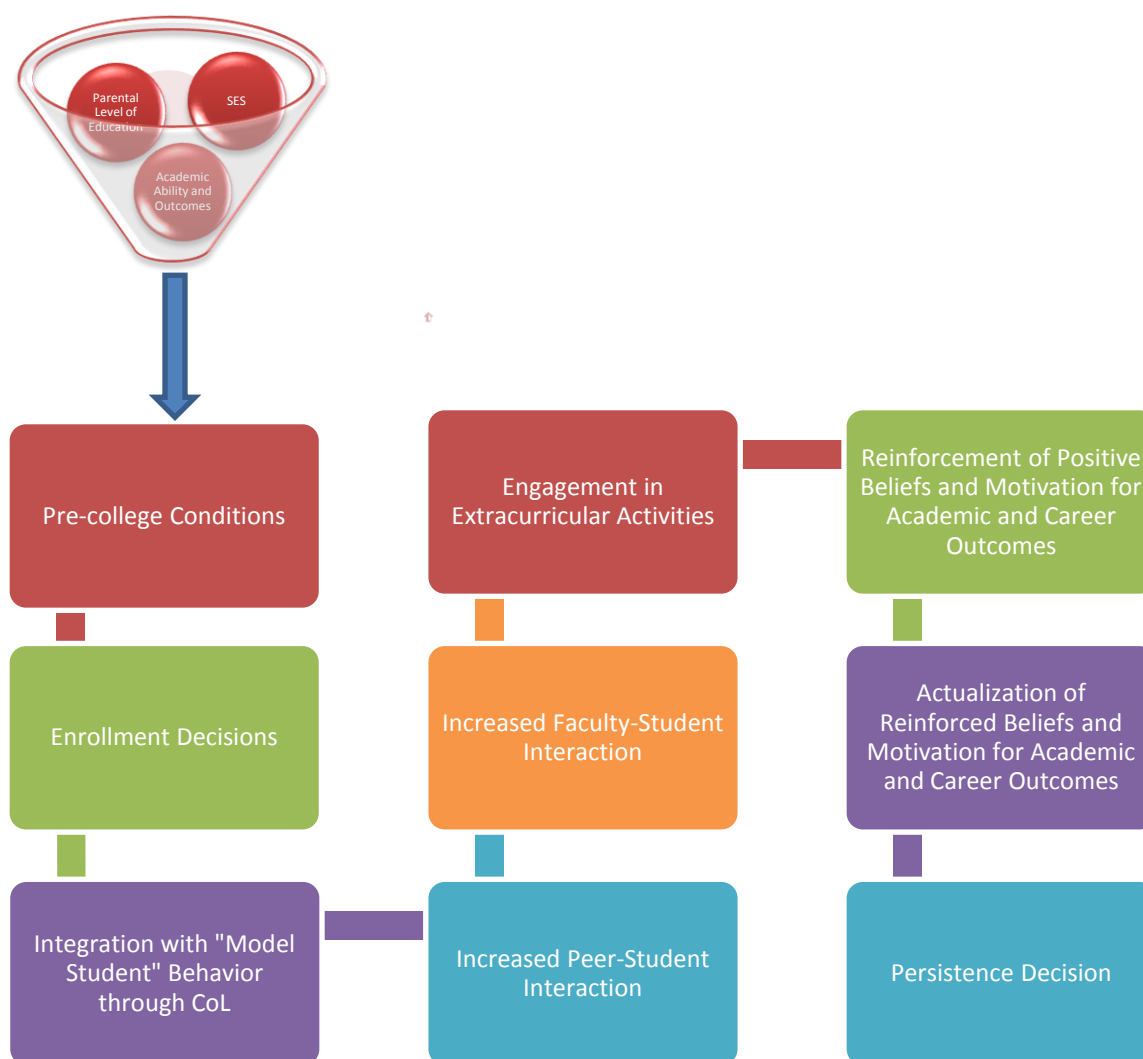


Figure 5.13. Author's proposed model of persistence decision-making with moderating variables.

The ultimate goal of retention initiatives is an improved educational experience, not only retention of students; institutions must also seek timely completion, rather than merely working toward increased graduation rates. Findings from the current study must be connected to institutional data to build retention models and develop strategies that promote student engagement and persistence. In addition to serving as an impetus for localized improvements in various institutions, evidence collected in this study may be leveraged to increase opportunities

for upper- and lower-level students to coexist in the classroom, improve the college experience for students from nontraditional backgrounds, advance college rankings, and bolster institutional approaches to improve accountability and responsibility.

Although individual effort and motivation to complete college (persistence) may be viewed as an internal set of behaviors, student involvement and institutional practices emerged here as key correlates with such persistence. Thus, institutions must focus on mechanisms and strategies through which they can arrange curricular experiences and extracurricular activities to foster and improve student engagement. Because previous research indicates that precollege achievement is not significantly related to collegiate persistence, engagement and the perpetuating institutional practices must be explored further to ascertain how and why students persist. In light of the emphasis placed on college completion and successful matriculation as a precursor to employment, success strategies have become a primary focus for higher education practitioners.

From a macro-level perspective, findings like those presented here also have great potential to aid institutions in their efforts to reach pedagogical and outcome goals in retention and graduation. Further, the findings presented here may change institutional approaches to accountability (Pascarella & Terenzini, 2005) and responsibility for student success, shifting the focus from student behavior to institutional practices inside and outside of the classroom.

Although institutional size and student experiences vary greatly within and between sectors and types of institutions, the key findings here are largely relevant to students in any setting who are at high risk for failure, stop-out, and drop-out. New information about FGS has the potential to bring cohesion to the contemporary piecemeal use of strategies such as DFWI reporting (an institutional acknowledgement of historically challenging courses), early alert systems, and first-

year programs, and to mediate the ongoing debates about the use of professional versus faculty-oriented advising. Linking these practices through a CoL may be a viable solution.

A key anecdotal observation made during the collection of these data was that many programs aimed at FGS are often provided as optional activities for students. Although participation in the program under study is also voluntary, there has been substantial evidence that such programs yield greater impact when they are treated as a mandatory part of the student experience. Williams and Hellman (2000) noted that when students are assumed to choose their own success behaviors (referred to as “self-regulation”), they are expected to “set reasonable personal and professional goals for themselves, monitor their progress without authoritative intervention or guidance, and adopt new strategies when necessary” (p. 5). These authors point out that FGS report lower levels of self-regulation than CGS. But what occurs when students are not self-regulated or when they miss one of the aforementioned stages in success planning? This may explain the large number of students in the study who engaged in only the required activities. Looking forward, perhaps faculty and instructional designers could consider structuring courses in ways that promote self-regulation (McMahon, Cowan, & Oliver, 2001; Dabbagh & Kitsantas, 2002). Additional research is needed to identify correlations between engagement and self-regulation to determine whether institutional expectations for students are reasonable. Additional questions emerge from this line of inquiry, such as “Do students who are more engaged also have stronger self-regulation?” and “Do students gain self-regulation skills through engaging in activities with more experienced peers who demonstrate self-regulatory behavior (learning communities and peer mentorship) or faculty who encourage such behaviors through formal and informal interaction with students (faculty mentorship)?” Schunk and

Zimmerman (1996) suggest that social as well as self-directed activities may contribute to self-regulation, but scholars have not yet reached a consensus on this matter.

Institutional policymakers and practitioners must shift the persistence paradigm in order to better understand the role and impact of retention assessment, orientation programs, early warning systems, faculty-student interaction, and other practices in helping students to persist and graduate.

Recommendations for future research

As the urgency of degree attainment increases, higher education practitioners and policymakers must gain clarity on practices that effectively move high-risk students closer to successful completion of college. The focus must turn toward institutional effectiveness, accountability, increased student learning and development, retention, persistence, and the surpassing of minimal completion goals.

Existing studies have examined the differences between first-generation college students and continuing-generation students solely on the basis of their parents' educational status. This study explored the role of first- and second-year interventions in promoting institutional retention, student persistence, and engagement. This research has focused primarily on highlighting the predictors of persistence and engagement among identified FGS at an HBCU. Few studies have explored the experiences of matriculating FGS, and even fewer have identified specific retention strategies that have proven effective with this unique population of students. As retention, persistence, and engagement gain prominence in the national discourse on higher education, it is imperative that a pedagogical and practical shift be made to emphasize the significance of institutionalizing student success practices. A growing body of evidence suggests that one of the most important ways to achieve this change in focus involves institutions

encouraging and supporting students to increase their involvement with engaging educational practices that have already been linked empirically with beneficial outcomes. The results discussed here suggest that the use of these practices as a means of improving persistence is an imperative for colleges and universities. This study sheds light on the magnitude of student persistence and engagement and the current disconnection between institutionalized practices and the impact of such practices.

Future research must concentrate on identifying appropriate measures for assessing engagement and persistence, exploring the relationship between the institutional organization of retention efforts and student outcomes, examining the role of HBCUs and other MSIs in increasing the success of students at a high risk for failure, and exploring trends and high impact practices to establish benchmarks for institutions of all types.

Student graduation rates and first-to-second year persistence rates are widely used in the algorithm to measure college rankings (College Board, 2009). However, these measures have been consistently challenged for their lack of dimensionality. New measures must be identified against which to rank institutional performance. Future research should also emphasize the development of objective measures to assess student gains and levels of engagement, since scholars disagree about the use of self-reports in assessing success outcomes (Bowman, 2009).

The current study offers an impetus for such research, in that it used self-reports but asked students to report gains after their third and/or fourth years of study. Like the current study, these types of data will provide insight on the long-term challenges and successes experienced by matriculating students. Additional research on these longitudinal gains will provide an impetus for practical and political reform for institutions seeking to customize their retention efforts to the populations they serve. Further, quantitative and qualitative research that

explores the relationship between the institution and the student as it relates to persistence is needed to illuminate innovative and informed strategies for increasing retention and persistence. These types of studies will also reveal the extent to which institutional rhetoric about student success aligns with “an accompanying commitment to resources, policies and practices” (College Board, 2009). Some (Braxton, McKinney, & Reynolds, 2006; Hossler, 2006) have concluded that most institutions do not use rigorous standards to track and assess their progress in retention and persistence, in spite of the fact that some (The College Board, 2009) suggest that a key indicator of an institution’s commitment to student success is its consistency in tracking persistence. It is interesting to note here that the institution under study maintains a retention rate of 77% but does not track the number of first-generation or otherwise “at-risk” students it serves.

The replication of this type of investigation in various settings and with differing cohorts of students will illuminate practices and processes that enhance the student experience and improve academic success outcomes. In particular, the findings of this study and replication through additional research will benefit MSIs as they contend with serving growing populations of first-generation college enrollees in the midst of economic strain and a national education crisis. The Institute on Higher Education Policy (2014) reports that these institutions, which enrolled more than 5 million undergraduates between 2011 and 2012, face a dual burden of enrolling a large number of high-risk students who are also disproportionately underprepared. These institutions are under pressure to produce successful students, to maintain rigor, and to do so with limited funding. As on most campuses, use of proven high-impact practices is unsystematic at many MSIs, to the detriment of student learning. However, once implemented,

these cost-effective high impact practices offer strong potential for increasing engagement and improving success outcomes.

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APPENDIX A
LIBERTY UNIVERSITY INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

LIBERTY UNIVERSITY
INSTITUTIONAL REVIEW BOARD

January 15, 2014

Erica Woods-Warrior
IRB Exemption 1750.011514: The Student Experience: The Effects of College Retention Practices
on First-Generation Success

Dear Erica,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required.

Your study falls under exemption category 46.101 (b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
 - (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption, or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054



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APPENDIX B
UNIVERSITY APPROVAL LETTER

[REDACTED] UNIVERSITY

[REDACTED]
Office of the Associate Vice President of Governmental Relations
[REDACTED]

December 12, 2013

Liberty University
Attn. Institutional Review Board
1971 University Blvd., Suite 1837
Lynchburg, VA 24515

Re: Erica Woods-Warrior – Permission to Recruit

Dear Sir/Madam,

I am writing to inform you of the permission granted to Ms. Erica Woods-Warrior to recruit student participants who were enrolled in the 2010-2012 cohorts of the Program for the Retention and Enrichment of Successful Students (PRESS) at [REDACTED]. Such research has been approved through the [REDACTED] University Institutional Research Board. It is understood that student participants will be recruited through varied medium of communication, and will complete a questionnaire about their student experience while enrolled in the PRESS Program.

Further, it is understood that this research will be conducted in a way that ensures the protection of all student participants and compliance with Family Educational Rights and Privacy Act (FERPA).

Thanks in advance for your attention to this matter. Certainly, if you have any questions or concerns, please feel free to contact me at your convenience. As always, I remain

Very truly yours,

[REDACTED]
cc: [REDACTED] Project Coordinator

[REDACTED]
THE UNDERGRADUATE COLLEGE

GRADUATE COLLEGE
COLLEGE OF [REDACTED]

COLLEGE OF
CONTINUING EDUCATION

APPENDIX C
LETTER TO PARTICIPANT

Dear PRESS Participant:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for an Ed.D., and I am writing to invite you to participate in my study.

If you choose to participate, you will be asked to complete a short 19-item online questionnaire. It should take approximately 20 minutes for you to complete the questionnaire.

To participate, go to <https://www.surveymonkey.com/s/PRESS2014> and click on the link provided to complete the survey.

An informed consent document is included on the website. The informed consent document contains additional information about my research, but you do not need to sign and return it. Please click on the “next” button at the end of the informed consent document to indicate that you have read it and would like to take part in the survey. A copy of the informed consent document is also attached to this email for your records.

Sincerely,

Erica Woods-Warrior

APPENDIX D
PARTICIPANT CONSENT FORM

Consent Form

The Student Experience: The Effect of Three College Retention Practices on First-Generation
Success Outcomes

Erica Woods-Warrior
Liberty University
School of Education

You are invited to be in a research study of first-generation college students who have been enrolled in the Program for the Retention and Enrichment of Successful Students (PRESS). You were selected as a possible participant because you enrolled in PRESS during your first or second year of study at Hilman University. I 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 Erica Woods-Warrior in the School of Education at Liberty University.

Background Information:

The purpose of this study is to better understand the impact of faculty mentorship, peer mentorship, and integrating first-year and upper-level students in the same classroom. This study will focus on the level of student engagement and success obtained during your first and second years of study.

Procedures:

If you agree to be in this study, you will be asked the following:

You will be asked to answer a set of questions about your academic and social experiences at Hilman University during your enrollment in PRESS. The questionnaire should take approximately 20 minutes.

Risks and Benefits of being in the Study:

The study has minimal to no risks. The risks are no more than any participant would encounter in everyday life.

While you may not receive any direct benefit from completing this questionnaire, many people find that sharing their experiences this way and taking an inventory of their behaviors to be a valuable experience. We hope this activity will contribute to the improvement of programs that support parents and families.

Compensation:

You will not receive payment or compensation for your participation in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify you or any other participant. Research records will be stored securely and only the researcher will have access to the records. **All data will be maintained for three years after the completion of the study and then shredded upon the completion of this study.**

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 Liberty University or Hilman University. 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 Erica Woods-Warrior. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her via email or telephone. The faculty advisor for this study is Dr. Mary Garzon, who may be reached via email or telephone.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Suite 1837, Lynchburg, VA 24502 or email at irb@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

By completing this survey, I am acknowledging that I have read and understood the above information. I consent to participate in the study.

APPENDIX E SURVEY INSTRUMENT

First-Generation College Students

***1. In your experience at your institution during the current school year, about how often have you done each of the following? Please select one answer only.**

	Very Often	Often	Sometimes	Never
Asked questions in class or contributed to class discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made a class presentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepared two or more drafts of a paper or assignment before turning it in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended class without completing readings or assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with other students on projects during class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with classmates outside of class to prepare class assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Put together ideas or concepts from different courses when completing assignments or during class discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed grades or assignments with an instructor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talked about career plans with Faculty Mentors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed ideas from your readings or classes with faculty members outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked harder than you thought you could to meet an instructor's standards or expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked with faculty mentors on activities other than coursework (committees, orientation, student life)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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activities, etc.)

Discussed Ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

☐☐☐☐

Participated in classroom discussions with upperclassmen students

☐☐☐☐

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***2. During your first year of study, which of the following activities did you engage in with your PRESS peer mentor and/or faculty mentor?**

	Peer Mentor	Faculty Mentor	Both	Neither
Attended an athletic event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed current events (ie: music, politics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended an extra-curricular activity (ie: community service, step show, seminar, movie or theatre production)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed your academic and career goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Received advice on personal matters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exchanged communication with your mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***3. During the current school year, about how often have you done each of the following?**

	Very Often	Often	Sometimes	Never
Attended an art exhibit, play, dance, music, theater, or other performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended a PRESS workshop or activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in activities to enhance your spirituality (worship, meditation, prayer, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examined the strengths and weaknesses of your own views on a topic or issue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learned something that changed the way you understand an issue or concept	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***4. Which of the following have you done or do you plan to do before you graduate from your institution?**

	Done	Plan to do	Do not plan to do	Have not decided
Practicum, Internship, field experience, co-op experience, or clinical assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community service or volunteer work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in a learning community or some other formal program where groups of students take two or more classes together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work on a research project with a faculty member outside of course or program requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign language coursework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Study abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Independent study or self-designed major	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Join a student organization, sorority or fraternity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Join an Intramural athletic program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Join a university athletic team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***5. Mark the box that best represents the quality of your relationship with your PRESS Peer Mentor on a scale of 1 to 7, with 7 representing Friendly, Supportive, Sense of belonging**

	Unfriendly, Unsupportive, Sense of alienation	2	3	4	5	6	Friendly, Supportive, Sense of belonging
Relationships with your PRESS peer mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***6. Were you continuously enrolled at [REDACTED] University from your freshman year to your sophomore year? (no gaps)**

- ☐ Yes
☐ No

***7. If you answered "No" to Question #6, why?**

- ☐ Financial Hardship
☐ Academic Struggles
☐ Dissatisfied with Institution
☐ I answered "Yes" to Question #6
☐ Other (please specify)

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***8. About how many hours do you spend in a typical 7-day week doing each of the following?**

	0	1-5	6-10	11-15	16-20	21-25	26-30	More than 30 hours per week
Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working for pay on campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working for pay off campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in co- curricular activities (organizations, campus publications, student government, fraternity or sorority, Intercollegiate or Intramural sports, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxing and socializing (watching TV, attending parties, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engaging in activities with your PRESS Faculty Mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engaging in activities with your PRESS Peer Mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engaging in activities with PRESS Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***9. Mark the box that best represents the quality of your relationship with your PRESS Faculty Mentor on a scale of 1 to 7, with 7 representing Available, Helpful, Sympathetic**

	Unavailable, Unhelpful, Unsympathetic	2	3	4	5	6	Available, Helpful, Sympathetic
Relationship with your PRESS Faculty Mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***10. In your opinion, to what extent does the PRESS Program emphasize each of the following?**

	Very Much	Quite a bit	Some	Very Little
Spending significant amounts of time studying and on academic work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing the support you need to help you succeed academically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encouraging contact among students from different economic, social, and racial or ethnic backgrounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping you cope with your non-academic responsibilities (work, family, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing the support you need to thrive socially	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending campus events and activities (special speakers, cultural performances, athletic events, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***11. To what extent has your experience in the Community of Learning (CoL) program activities contributed to your knowledge, skills, and personal development in the following areas?**

	Very Much	Quite a bit	Some	Very Little
Acquiring a broad general education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquiring job or work-related knowledge and skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking critically and analytically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyzing quantitative problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using computing and information technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working effectively with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voting in local, state, or national elections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning effectively on your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding people of other racial and ethnic backgrounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solving complex real-world problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a personal code of values and ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributing to the welfare of your community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a deepened sense of spirituality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***12. To what extent has your experience with your PRESS Peer or Faculty Mentor contributed to your knowledge, skills, and personal development in the following areas?**

	Very much	Quite a bit	Some	Very little
Acquiring a broad general education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquiring job or work-related knowledge and skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking clearly and effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking critically and analytically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyzing quantitative problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using computing and information technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working effectively with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voting in local, state, or national elections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning effectively on your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding people of other racial and ethnic backgrounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solving complex real-world problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a personal code of values and ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributing to the welfare of your community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a deepened sense of spirituality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***13. Mark the box that best represents the quality of your relationship with other Faculty Members on a scale of 1 to 7, with 7 representing Helpful, Considerate, Flexible**

	Unhelpful, Inconsiderate, Rigid	2	3	4	5	6	Helpful, Considerate, Flexible
Relationship with other Faculty Members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***14. What is your cumulative grade point average?**

- ☐ 2.0 or below
- ☐ 2.1 - 2.5
- ☐ 2.6 - 2.9
- ☐ 3.0 - 3.4
- ☐ 3.5 - 3.9
- ☐ 4.0 or above

***15. How old are you?**

- ☐ 16 - 17
- ☐ 18 - 24
- ☐ 25 - 30
- ☐ 31 or above

***16. Please describe your race/ethnicity**

- ☐ White/Caucasian
- ☐ Black/African-American
- ☐ Asian/Pacific Islander
- ☐ Hispanic (Non-White)
- ☐ Other (please specify)

***17. What is your gender?**

- ☐ Male
- ☐ Female

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*18. Are you an international student?

☐ Yes (If yes, please provide your country of origin in the box provided)

☐ No

Other (please specify)

*19. What is your classification?

☐ Freshman (1st year)

☐ Sophomore (2nd year)

☐ Junior (3rd year)

☐ Senior (4th year)