2013

Relationship Of Peer Mentoring To Academic Success And Social Engagement For First Year College Students

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A dissertation submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department: Leadership Studies

Major: Leadership Studies

Major Professor: Dr. Ceola Ross Baber

Greensboro, North Carolina

2013

The Graduate School
North Carolina Agricultural and Technical State University
This is to certify that the Doctoral Dissertation of

Brenda O. Mitchell

has met the dissertation requirements of
North Carolina Agricultural and Technical State University

Greensboro, North Carolina
2013

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Biographical Sketch

Brenda O. Everett Mitchell is a native of Orangeburg, South Carolina. She currently resides in Durham, North Carolina and is the Associate Chair for Student Services in the Department of Allied Health Sciences at The University of North Carolina at Chapel Hill. The Office for Student Services is responsible for collecting and maintaining data for Allied Health students and assisting with the financial, academic and social concerns of students. She has maintained a faculty appointment in the Division of Speech and Hearing Sciences since 1996 and teaches an undergraduate Introduction to Communication Disorders course. She completed a Bachelor of Science degree at South Carolina State University and Master of Science degree at Pennsylvania State University and has worked in various clinical settings prior to her academic appointment at UNC-CH. Brenda is a candidate for the Ph.D. in Leadership Studies at North Carolina Agricultural and Technical State University.

Dedication

This research is dedicated to my loving and devoted husband, Glenn Javonne Mitchell, who was extremely supportive of my doctoral studies and very patient as I spent many, many hours reading and writing. He was often known to come into the area that I liked to study and play the piano while I studied. We would end up laughing or singing hymns together to stay encouraged along the journey.

This was indeed a family effort so I also dedicate this dissertation to our amazing children—Wayne, William, Jantzen, Jason, Jared, and Jordan as an inspiration to achieve their loftiest goals and to never give up when God has given them a direction to follow. They were occasionally asked to read something and provide feedback during a visit or just sit at the dining room table with me while we talked and I kept typing. Even my four-year-old grandson, Jayden, learned to wait quietly until GramB could play with him during summer visits. He would remind me of what was really important when he asked "GramB aren't you tired yet? It's time to play."

Acknowledgements

My passion for mentoring young people stems from the wisdom and mentoring of all the giants who came before me. I stand in awe of God's gracious compassion toward me, as I think of the many great individuals who have deposited into my life to bring me to this point in life. My precious grandmother, Susie Everett, and parents, Francis and Alethia Everett, were always exceptional role models and encouraged my brother, Ralph, and me to strive for excellence as we run the race of life. I recall telling my sons, Wayne and William, and my nephew, Jason, at the homegoing celebration for my father, that the baton had been passed and it is now their turn to run a lap of the race. That, to me, is the essence of mentoring.

Thanks to my brother, Ralph, for always supporting me and making sacrifices to ensure my happiness and wellbeing. You are the best big brother a girl could ask for, even when you give me a hard time. I know it's all in love.

I don't believe that things just happen but that we have divine appointments with individuals for times, reasons, and seasons in life. Therefore, I acknowledge the following individuals: my awesome colleagues who carpooled with me for the past four plus years to and from classes in Greensboro. We have become forever friends as we have laughed and cried together, shared life's triumphs and battles, and kept one another accountable to never give up when life just seemed too hard. Humor was often our relief so thanks Steve, Everett, Trinnette, Barbara, and LaMonica.

My boss of 12 years, Lee McLean, supported me every step of the way to becoming Dr. Brenda. She and I frequently had conversations about what I was learning and how to use the information in our leadership encounters. Lee, you are amazing. Thanks for everything!!!

I am so grateful to my committee for believing in me and helping me complete the dissertation. Dr. Ross Baber was the best chair ever. She kept my feet to the fire and would not accept anything less than my best, no matter how many revisions were required. I appreciate it now! Cathy Zimmer was more than a committee member; she met with me weekly for over a year to be sure that I understood the quantitative statistical procedures that were necessary to analyze my data. Without Cathy, I could not have completed this research. You are more than a teacher but a mentor and friend that I will always hold dear.

My Allied Health Sciences family, including my dear friend Terita Williams, who has moved on to another role but never forgotten for her words of encouragement and admonition to achieve this goal. A special thank you to the student services staff—Benita, Perry, Ina, Alice, Gabrielle, and the students who were always supportive and loyal. You maintained excellence in the office even when I was not present—thanks gang! You are the best!

I could not close without recognizing my devoted prayer partners in Christ, Lisa Carter and Seletha Shaw, who prayed with and for me and kept me focused on the prize. As Moses needed Joshua and Caleb to hold his arms up in battle, you were always there for me and I am eternally grateful for your faithfulness.

Above all, the perfect model of peer mentoring was from my precious Lord and Savior, Jesus the Christ who walked with His disciples, talked with them and modeled how to love their fellow man. All the mentoring models in the world cannot exceed the model that He provided and I intend to follow His example as I continue to help students.

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Abstract

A correlational explanatory research design examined the relationship between peer mentoring, academic success and social engagement of first year college students participating in a peer mentoring program at a research one university in the southeastern United States. One hundred thirty-eight participants from the peer mentoring program responded to a Peer Mentoring, Academic Success and Social Engagement (PMASSE) questionnaire created and pilot tested by the researcher; the PMASSE had a Cronbach alpha reliability of 0.95. Peer mentoring was the independent variable and academic success and social engagement were the dependent variables. Three primary theoretical frameworks were utilized: social constructivism, theory of student involvement, and the theory of social integration. Descriptive statistical analyses showed several patterns related to the quality of the peer mentoring experience, level of academic success, and social engagement as perceived by the first year students. Inferential statistical analyses—including Fisher's exact test and one-way ANOVAs—yielded several statistically significant relationships between peer mentoring, academic success, social engagement, and demographic mediating variables.

CHAPTER 1

Introduction

Students can expect challenges and obstacles during the first year of college (Galbraith & James, 2004; Nora & Crisp, 2007). Are students prepared to meet these challenges when they enter college? Is the way they handle these obstacles a predictor of their college success or not? Researchers give credit to the following factors for college success: social and academic integration, high GPAs, student involvement/engagement, retention from the first to the second year of college, networking and graduation (Astin, 1993; Cabrera, Nora & Castaneda, 1993; Chickering & Gamson, 1987; Tinto, 1987; Shrader & Brown, 2008). The aim of my study was to understand factors affecting college success for historically underserved students.

Statement of the Problem

Student mentoring in higher education is not a new concept and has also been reported as a key factor in college student success. A number of studies on the topic of mentoring focus on European American students or international students (e.g., Baker & Griffin, 2010; Crisp & Cruz, 2009; McClenney, 2004). However, I found few peer reviewed articles with a primary focus on economically and racial/ethnic underserved students and the correlation between their academic success, social engagement and peer mentoring. Pascarella and Terenzini (2005) discovered that most studies were largely based on samples of "traditional" full-time White undergraduate college students who attended four-year institutions, did not work and lived on campus and these previous studies did not include racial/ethnic minorities or circumstances of older, non-traditional students (Miranda, 2011).

Nearly two thirds of all new U.S. jobs by 2018 will require more than a high school diploma according to Lacey and Wright (2009). The U.S. Bureau of Labor Statistics (2012)

supports these findings and projects that twenty-one of the thirty fastest growing occupations require postsecondary education (Miranda, 2011). The National Center for Education Statistics (NCES) indicated in *The Condition of Education 2011* that since 2004, 70% of students who enrolled in college did so immediately after high school. NCES further reported that "about 54% of male and 60% of female first-time students who sought a bachelor's degree and enrolled at a four-year institution full time in the fall semester of 2002 completed a bachelor's degree at that institution within six years" (p. 18). In light of the need for students to complete college and enter the work force, it is especially alarming to discover the percentage of students who may not receive adequate guidance to obtain the degrees they seek to enable them to succeed in college. According to the Center for Community College Student Engagement (2010), students need to integrate their learning experiences by being involved in the campus community. The students, who are not connected, are more likely to leave prior to achieving their academic goals. In corroboration with this idea, according to Carini, Kuh and Klein (2006), one of the best predictors of learning and personal development is student engagement. Furthermore, when the student engagement is related to educational productivity students are "developing habits of the mind and heart that enlarge their capacity for continuous learning and personal development" (Shulman, 2002, p. 3).

The U.S. Department of Education (2012) reported the following trends in education for full-time, four year degree seeking students:

- There are 18 million undergraduate students in the United States of America.
- 75% of undergraduate students attended public degree granting institutions.
- 11 million undergraduate students attended institutions full time in the fall 2010
- Seven million attended part-time.

- As for retention rates, 79 % of first-time, full-time students who entered 4-year institutions in 2009 returned the following year to continue their studies.
- Completion rates for first-time, full-time students who sought a bachelor's degree in fall 2004, varied by race/ethnicity. Asian/Pacific Islander students had the highest 6-year graduation rate (69%), White students (62%), Hispanic students (50%), Black and American Indian/Alaska Native students (39% each).
- Educational attainment of 25- to 29-year-olds who achieved a bachelor's degree was reported to have increased from 22 to 32% from 1980–2011.
- During the same 31 year time span, the attainment gap for a bachelor's degree or higher between Whites and Hispanics widened from 17 to 26 percentage points, and the gap between Whites and Blacks widened from 13 to 19 percentage points.
- In terms of gender, females have greater attainment than males at each education level since 1980 (U.S. Department of Education, 2012).

Arendale (2008) provided the historical backdrop for how the U.S. has approached education over the years. The 1960s marked a time of change in the approach to American education. Under the leadership of the U.S. President Lyndon B. Johnson, a former school teacher, the Office of Compensatory Education was established through national civil rights legislation within the U.S. Office of Education. The compensatory education approach was created to support access for academically underprepared and economically disadvantaged students. This approach focused on the individual student and the living and learning environment in which the student interacts. Proponents of this approach believed that there was a correlation between academic achievement of students and their economic and environmental conditions. This approach was inclusive of academic preparatory work, supplemental learning,

enrichment activities, and higher parental involvement in school as well as systemic changes in the school environment.

The Economic Opportunity Act of 1964 and later the Higher Education Act of 1965 expanded access to higher education for disadvantaged students in two ways: (a) TRIO (Upward Bound, Talent Search, and Student Support Services) programs and (b) need-based financial aid for economically disadvantaged students known as Pell and Perkins Grant programs (Arendale, 2010). As a complement to President Lyndon B. Johnson's War on Poverty, eight federal programs were funded by the federal government at hundreds of colleges to encourage access and success of previously disenfranchised students. U.S. Department of Education (2012) reported the addition of five more programs: Educational Opportunity Centers in 1972, the Training Program for Federal TRIO programs in 1976, the Ronald E. McNair Post baccalaureate Achievement Program in 1986, Upward Bound Math/Science in 1990, and the TRIO Dissemination Partnership in 1998. These TRIO programs provide a pipeline to access and opportunity for students including traditional students, veterans, and displaced workers (U.S. Department of Education, 2012).

U.S. President Barack Obama's 2011–14 Education Strategic Plan challenged America to meet an ambitious goal for education by 2020—he charged us to once again have the highest proportion of college graduates in the world (U.S. Department of Education, 2011). The 2011–2014 Education Strategic Plan focused on our current ranking in the world and highlighted that a generation ago, the U.S. was ranked first in the world in the rate of college degree attainment for 25 to 34-year-olds; now we rank 16th and the global achievement gap is growing.

These historical occurrences are significant to my study because mentoring and college success are thought to be related, according to researchers such as U.S. Department of Education

(2012) and Baker and Griffin (2010).They have established in the literature that some students are at greater risk than others of completing post-secondary education. In addition to access, positive interactions have a significant impact on promoting the success of students from underrepresented backgrounds (Baker & Griffin, 2010). My study focused on the relationship between peer mentoring, academic success, and social engagement for historically underserved college students. This study focuses on the historically underserved students as described by Kuh et al. (2006), as those students who are (a) first generation, (b) racial and ethnic minorities, and/or (c) low income.

Theoretical Orientation

The primary theoretical orientation that framed my study is social constructivism. Social constructivist theory, also known as social development theory, is credited to Lev Vygotsky (1978) and stresses the fundamental role of social interaction in the development of cognition. Vygotsky believed strongly that community plays a central role in the process of "making meaning." This theorist emphasized the significance of important learning taking place through social interactions with skillful tutors. In the instance of a child, the tutor may model behaviors and/or provide verbal instructions for the child, then the child seeks to understand the actions or an instruction provided by the tutor and internalizes the information, using it to guide or regulate his/her own performance. Vygotsky refers to this concept as co-operative or collaborative dialogue. Vygotsky's work is based on two main principles of cognitive development: the more knowledgeable other (MKO) and the zone of proximal development (ZPD). MKO refers to someone who has a better understanding of a higher ability level than the learner with respect to a particular task, process, or concept. In fact, it does not have to be a person. It could be an electronic tutor. ZPD is the area where the most sensitive instruction or guidance should be

given which allows the child to develop skills that they will then use on their own, leading to developing higher mental functions.

This theory relates well to my investigation because Vygotsky views interactions with peers through collaborative learning as an effective way of developing skills and strategies when individuals having different levels of ability are grouped together. This theory is related to academic success in my study.

Two other related theories are the theory of student involvement (Astin (1984) from the psychological viewpoint and the theory of social integration (Tinto, 1987) from the sociological development viewpoint. These three theories (social constructivist, student involvement, and social integration) are all relevant because together they make up the primary aspects of college engagement—cognitive, social and psychological.

The theory of student involvement is credited to Alexander Astin (1984) and argues that student effort and investment of energy are essential to bring about the desired learning and development in a particular curriculum. This theory of involvement, according to Astin, focuses on student involvement as the major concern. Astin further explains that "student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1999, p. 518) It views student time and energy as finite institutional resources. This model demonstrates that student outcomes are a function of the environment that they experience as a college student and their pre-college characteristics. Corella (2010) captured this concept as the interaction between the student's characteristics and environment and determined that the students who are more involved in purposeful activities are successful and described it as student engagement.

The theory of student integration or interactionalist theory is credited to Tinto (1987) and has a sociocultural perspective. Tinto focuses on cultural rites of passage. He contends that students must separate from their past associations (e.g., family, high school peers) in order to make the college transition and interact with members of new groups. Tinto believed that when students do not effectively distance themselves from their family or community of origin, they have difficulty adopting the values and the behavioral patterns that typify the environment of the institution they are attending. This theory relates to peer mentoring in my study.

Purpose of the Study

My correlational explanatory study examined the relationship between peer mentoring, academic success and social engagement of second year college students at a Carnegie One classified public university in the southeastern United States, given the pseudonym of Southeast State University. A questionnaire, Peer Mentoring, Academic Success and Student Engagement (PMASSE), with items measuring the independent variable (peer, mentoring) and the dependent variables (academic success and social engagement) was administered to second year college students. All of the students had participated in a peer mentoring program during their freshman year. Controlling variables added to the design included student's academic background (e.g., size of high school); student's community background (e.g., rural, suburban, urban; population demographics); student's parental level of education; and student's gender; race/ethnicity; and first generation college attendee.

Context of the Research Site

SE University is a public university with a total undergraduate student population exceeding 18,000. The university has a commitment to ensuring that eligible low-income students who are admitted can enroll without concern about paying for college**.** This is achieved

by a combination of assessing the students' documented financial need and providing work study opportunities**.** Students are accepted into this program after completing an application for financial aid then they are automatically considered for the funds**.** These funds are received by approximately 15% of the total student population. In addition, these students receive academic and personal support services to enhance their college experience**.** For the past nine years, SE University has incorporated faculty/staff and peer mentoring to provide this additional support.

The peer mentoring program at SE University provided guidelines for mentors to follow as they accepted the privilege of role model for the incoming first year class of undergraduate students**.** This was a volunteer opportunity for upper class students with responsibilities for helping first year students in their growth and development as described in the orientation as assisting mentees adjust to the academic and social atmosphere at SE University**.** The qualities of a successful peer mentor were described as: (**a**) excellent and effective scholarship; (**b**) strong, consistent values; (**c**) maturity, exhibited by sound judgment and common sense; (**d**) flexibility with a sense of humor, and (**e**) enthusiastic commitment to the goals of the program**.** Mentors were assigned three to four mentees at the beginning of the academic fall semester**.** They were expected to maintain a cumulative grade point average of 2.5 or above, maintain confidentiality of all communications, refer mentees to the appropriate staff when deemed necessary for appropriate intervention and to provide accurate information to mentees regarding university policies, rules and regulations**.** They received Mentee Contact forms to record communications with mentees and submit to the advising office monthly**.** Incoming first year students receive an email from the advising office indicating that they been assigned an upper class mentor who has volunteered to serve as their guide and to mentor them throughout the academic year**.** Students are told that it is not mandatory to participate but strongly encouraged.

Research Questions

The following questions guided my study:

1. How do the students describe the quality of the peer mentoring experience, as measured by the PMASSE?
2. How do students describe their first year academic success as measured by the PMASSE?
3. How do students describe their first year social engagement, as measured by the PMASSE?
4. How do academic success and social engagement differ by quality of the peer mentoring experience?
5. What are the relationships between peer mentoring and academic success, social engagement, and the demographics variables?

Definition of Terms

For the purposes of this study, it is imperative to clarify several key terms.

- **Academic Success** can also be defined using traditional measures of academic achievement, scores on standardized college entry exams, college grades, and credit hours earned in consecutive terms, which represent progress toward the degree (Kuh et al., 2006). Yazedijan, Toews, Sevin, and Purswell (2008), as cited in Corella (2010), explored college students' definition of success and found that there were three themes of success (a) grades, (b) social integration and (c) finding a balance in social and academic life.
- **At-risk college students** are those who are socially, financially, or academically underprepared or under supported—particularly are in need of mentoring in college (Craig, 2005).

- **Historically underserved students** are those students who are first generation, racial and ethnic minorities and/or low income (Kuh et al., 2006).
- **Mentor** is a more experienced person assisting a less experienced person to achieve a desired goal. (Terrion & Leonard, 2007).
- **Peer Mentoring** is a helping relationship in which two individuals of similar age and/or experience come together, either informally or through formal mentoring schemes, to maximize career-related and psychosocial assistance (Terrion & Leonard, 2007).
- **Protégé or mentee** is the less experienced or knowledgeable partner of a mentoring relationship who is seeking direction or guidance along a career trajectory from a more experienced and knowledgeable person (Haynes, Adams, & Boss, 2008).
- **Social Involvement/Engagement** is the extent to which a student feels connected to the college, and is involved in campus activities (ACT Policy Report).
- **TRIO** "Program outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. TRIO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities in progressing through the academic pipeline from middle school to postgraduate programs" (Retrieved from https://studentaid.ed.gov/glossary).
- **Underrepresented minorities** are defined as racial and ethnic populations that are underrepresented relative to the general population (AAMC, 2003).

Limitations and Delimitations of the Study

This research study has some initial limitations, as with all similar research, of (a) getting a minimum sample of the total population of students to respond and (b) relying on the students to elect to respond to the survey and to be open and reflective of peer mentoring experiences. I

needed a minimum of 100 respondents for a 95% confidence level, plus or minus 5%. It is noteworthy that students were required to recall specific peer mentoring events that occurred within days for some and months for others meaning that I will be relying on their recall ability as they respond to the questionnaire of the study (Marshall & Rossman, 2011).

Another delimitation of this study is that it is conducted using one southeastern university. As a result, my findings cannot be broadly applied unless subsequent researchers have similar situations, with similar research questions or questions of practice (Marshall & Rossman, 2011). Generalizability would not be expected of this study unless lessons learned can be applicable in other settings or across populations and the research can be broadly applied (O'Leary, 2004).

Significance of the Study

This study is significant from a policy perspective to inform administrators (e.g., policy makers, deans of schools, advising and student affairs officers) about the qualities that students perceive as valuable for a successful peer mentoring program at Southeast University. The results of this study could affect future policies regarding academic and social engagement of college students.

From a practice perspective, this investigation should provide strategies that may help to expand the scope of peer mentoring efforts, particularly for underserved students. The results should shed light on the way peer mentoring is practically used by the students. The descriptions of interactions can inform the "how to" when creating future programs.

From a student's perspective, this investigation can give voice to program participants by disclosing their perceptions of the peer mentoring program. Students in their first year of college may have an initial hesitation about participating in a peer mentoring program. This study

provides evidence about the perceived quality of peer mentoring as a helping relationship in which two individuals of similar age and /or experience come together to maximize academic success (Terrion & Leonard, 2007).

CHAPTER 2

Review of the Literature

This study was designed to address the relationship between peer mentoring, academic success, and social engagement for historically underserved first and second year college students. Specifically, what difference does peer mentoring make in academic performance and social engagement for historically underserved scholars at one university? Four relevant themes in the literature were determined and investigated: (a) peer mentoring in college, (b) peer mentoring as a factor in academic success, (c) peer mentoring as a factor in social engagement, and (d) needs-based academic support programs.

Peer Mentoring in College

Crisp and Cruz (2009) reviewed the literature over a seventeen year span of time, updated an article written by Jacobi (1991) and critically analyzed empirical literature specific to mentoring college students published between 1990 and 2007. Overall, findings were positive and indicated a positive relationship or an impact of mentoring on student persistence and/or grade point average of undergraduate students (Campbell & Campbell, 1997; Feeman, 1999; Kahveci et al., 2006; Mangold et al., 2003; Pagan & Edwards-Wilson, 2003; Ross-Thomas & Bryant, 1994; Salinitri, 2005; Sorrentino, 2007; Wallace et al., 2000). In addition, Crisp and Cruz discovered a lack of empirical studies and consistency in the definition of mentoring, even though the majority of studies (69%) focused on mentoring undergraduate students.

Baker and Griffin (2010) found that faculty-student interactions have an impact on students' self-confidence and engagement as thinkers and scholars in higher education and in the campus community and these students tend to be more interested in graduate education. Beck and Davidson (2001) established an early warning system for predicting low grades in college

students using a survey of academic orientations (SAO) scores and determined correlations between these scores and early identification of "at risk" college students.

McClenney (2004) stated, "We need to connect early and connect often. We need to help students set goals and milestones so that they can see possibilities, so that they have reason to come back to school on Monday, in January, next year" (p. 16).

Peer mentoring and tutoring became popular as an intervention over two decades ago. Many researchers who investigated this intervention concluded that the tutoring process has academic and psychological benefits to the mentor as well as the mentee. Good (2000) referenced Cloward (1976), with a statement that "the tutor was the major beneficiary of the tutorial experience" (p. 376) in terms of academic gains. It is not clear if this type of conclusion can be drawn from the peer mentoring relationships of current times. It was alluded to as needing further investigation. Santovec (1992) stated that programs which incorporate "upper-division minority students involved in peer support and counseling—show positive retention results" (p. 376). Peer mentoring appears to be a viable approach to assisting freshman students as they transition into the university environment by providing role models and leadership particularly for underrepresented students since faculty are not always ethnically diversity or readily available (Santovec, 1992).

Peer mentoring relationships may have a number of variables. The mentors and mentees may be matched according to age, ability, role or program specific criteria. Age as a factor means that students are matched according to being the same or close to the same age or a specific age difference (e.g., freshman to senior pairing). When students are matched according to ability, typically someone with relatively high ability is the mentor and assists someone with less ability (e.g., an A grade level student helping a C grade level student). Role continuity was

described by Miller (2002) as the extent to which mentors and mentees remain in their roles throughout the relationship. The opposite of remaining in the role from beginning to end of the relationship is called "reciprocal peer mentoring" wherein there is a give and take in terms of learning from each other. Relationships across institutions or groups (e.g., math mentors from other institutions) are in the category of program specific mentoring.

There are a number of advantages sited by Miller (2002) regarding peer mentoring. A key advantage is an abundance of potential mentors. This reduces the costs and the problems associated with recruiting external mentors. Another advantage is that more students are able to participate in peer mentoring and a broader range of needs can be addressed. Peer mentoring relationships have reported that it is easier to ask questions and to communicate with peers than with older adults. In addition, mentees have reported being able to concentrate for longer periods of time. From the mentors perspective, Gaustad, (1992) was given credit by Miller (2002) for the argument that mentors who have struggled academically will show more patience and understanding with their mentees because they are better able to empathize from their own experiences.

Ortiz-Walters, Eddleston, and Simione (2010) cited leading mentoring researchers of the 1980's, in their research by defining the mentoring relationship as usually developed with a more experienced and knowledgeable colleague and is characterized by a significant level of intimacy and emotional attachment. These authors also described career development and psychosocial assistance as the key functions of the mentor role is to provide support to protégés. Descriptors used for psychosocial assistance were words such as: advocacy, coaching, protection, challenging assignments, and exposure and visibility. This type of support was described as enhancing self-confidence, efficacy, and personal growth and is complementary to the career

development support that helps protégés learn to navigate the corporate life and provides guidance as they advance in the organization.

Jacobi (1991) reflected on the longstanding history of literature on mentoring in higher education as the apprentice model of graduate education and that it can also be viewed as a retention and enrichment strategy for undergraduate education.

Distinctions were made between formal and informal college mentoring by Kram (1988). Formal programs referred to programs where mentors and protégés are generally matched or assigned by a third party. These relationships tend to last for a set amount of time and for specific purposes. On the other hand, informal mentoring relationships often develop based on mutual interests or developmental needs (Kram, 1985)

Kasprisin, Single, Single, Ferrier, and Muller (2008) examined the effects of mandatory training for protégés on mentor outcomes using a large-scale e-mentoring program, called MentorNet. They found that when training was mandated for the protégés the mentors were more engaged in the program, more satisfied with their experience, and held their protégé in high esteem. This study relates to the expectations of the mentor and protégé and ultimate satisfaction with the mentoring relationship.

Hayes and Koro-Ljungberg (2011) investigated the dialogic exchanges and co-construction of knowledge among female graduate students, who met to discuss the ways in which the differences between mentors and mentees might be negotiated in order to develop and maintain mentoring relationships that benefit both partners. The authors concluded that good mentoring may be interpreted differently by the individuals involved. For example, one may create resistance and stasis for one partner and the other may create synergy and transformation for the other partner. The authors endeavored to engage female graduate students in a dialogic

exchange about their positive and negative experiences. They asked them to reflect on the differences that existed between themselves and their mentors. They also wanted these students to consider how these differences affected their willingness to acknowledge, accept or negotiate the roles and responsibilities of mentors and mentees. One participant concluded that "mentorship is about goodness of fit" (p. 705), which really summarized the findings of the study. In addition, the participants agreed on the importance of expectations being clearly expressed by the mentor and protégé.

Another interesting study was conducted by Smith-Jentsch et al. (2008) which looked at the impact of peer-mentoring by comparing face-to-face to electronic chat. It was revealed that despite the increasing use of e-mentoring programs, empirical research on the effectiveness of such programs is sparse. They discovered benefits and limitations to the e-mentoring concept and encouraged additional empirical research in this area as more and more universities and other agencies rely on electronic means of communication.

In conclusion, many researchers have looked at the topic of mentoring and its positive effect on the participants. All studies were conclusive that mentoring, in some form, proved to be valuable to mentors and/or mentees. It was also evident that the mentoring relationship is multi-faceted and has been investigated in many ways. However, relatively few studies have been conducted on the impact of mentoring specifically on historically underserved students participating in needs based academic support programs (Miranda, 2011).

Peer Mentoring as a Factor in Academic Success

Hatfield (2011) referenced a study by Fox and Connelly (2010) that the first advantage of having a mentor is the academic benefit. Mentees who participated in a peer-mentor program

were compared to students who did not engage in the peer-mentoring program. It was found that the engaged participants scored significantly higher not only on grades but also in how they were studying, scoring higher in "deep and strategic" methods of study. The students who did not have a peer mentor more often resorted to surface level studying characterized by simple fact memorization.

Positive interactions have a significant impact on promoting the success of students from underrepresented backgrounds according to Baker and Griffin (2010). Consequently, 'at risk' students from diverse backgrounds, first generation and low socioeconomic status deserve further attention as related to mentoring. According to Wright-Harp and Cole (2008), "in spite of ample documentation regarding the need to mentor underrepresented individuals of color, few models have been designed to provide effective mentoring strategies to reduce the high attrition rates and address the rapidly growing shortage of professionals, particularly males, in the health disciplines" (p. 5).

The need for mentoring for people of color cannot be overstated according to Orlando Taylor (1993). He expressed a simple yet profound statement that mentoring can only be effective if the protégé wants to be mentored. In his recommendations, he stated that persons of color should not be turned away from mentorship opportunities because of their lack of experience or their institutional affiliation.

Reddick (2006) investigated factors related to African American mentors at primarily White institutions (PWI). He found that the impact of four such mentors was profoundly influenced by the fact that they went to historically black colleges or universities (HBCU) and were committed to assist African American undergraduate students as they navigated a campus

environment fraught with challenges. Some of the key challenges expressed in the article were negotiating the social and academic environments in predominantly White graduate programs.

Kezar and Moriarty (2000) proposed that student affairs practitioners need to rethink key assumptions of their leadership development models and practices particularly among a diverse student body. The authors examined factors influencing leadership development among college students, focusing specifically on potential differences for women and African Americans. The sample included 9,731 students at 352 institutions. They looked at self-rated leadership development among college students including communication, self-confidence, and ability to influence others. They concluded that different strategies are necessary for the development of leadership among a diverse group of students.

Mentoring in academia: An examination of the experiences of protégés of color was an article written by Ortiz-Walters and Gilson (2005). These authors looked at the satisfaction of mentoring experiences of African, Hispanic and Native-Americans in the academic setting. The authors stated that empirical mentoring research has predominantly sampled White/Caucasian protégés so less is known about the experiences of protégés of color along with the experiences of those individuals who mentor them. One hundred and sixty-three of 400 Ph.D. business students of color students returned usable surveys for a 45.5% response rate. The majority of the respondents were African-American (73.6%), a fairly equal distribution of males (45.4%) and females (54.6%) and half of the students were married (49.7%) with a mean age of 36 years old. The results indicate that the students of color reported being more satisfied with mentors of color and their interpersonal comfort and commitment to the relationship was greater when levels of similarity were greater (e.g., surface level, having similar racial/ethnic background, and deep-level, having a mentor or protégé who is perceived to share similar values).

Ortiz-Walters (2010) also investigated the satisfaction with mentoring relationships looking at gender identity. She identified managers and/or professionals and she found that masculine protégés, who strongly identify with their career roles, report being more satisfied with mentors who provide career development support. Whereas, feminine protégés, who measure career success using socio-emotional-based criteria, report being more satisfied with mentors who provide psychosocial support.

Simon, Roff, and Perry (2008) provide some insights into the mentoring experiences of African American female administrators in social work education as protégés. They looked at four areas including the frequency with which the participants received career and psychosocial mentoring, the differences in mentoring behaviors that the participants received based on the mentors' race or gender, the efficacy of a cross-racial mentoring model, and the participants mentoring behavior as faculty members. Interestingly, none of the participants received frequent help from their mentors in balancing career and family as graduate students although they received assistance in many other psychosocial areas. They also reported that they received frequent help with career issues as doctoral students, although slightly fewer than half said their mentor introduced them to people who could help with their careers or included them in significant professional activities. The participants did not express any gender differences in treatment. The findings supported that mentors of all races and genders should be prepared to offer psychosocial, as well as, traditional career mentoring. This study addresses the research question of diverse students' perception of successful mentoring by providing feedback from 10 black females by suggesting that their mentors provided the psychosocial mentoring behaviors at or above the expected level on a survey in most cases. However, it does not address the question of establishing a mentoring relationship based on these differences or similarities.

Pascarella and Terenzini (2005), well known scholars of student retention, published a synthesis of over 2,600 studies, *How College Affects Students,* and were surprised to find that most of the studies were conducted on traditional White college students ranging in age from 18–22 year olds who attended four-year institutions full-time, who did not work, and who lived on campus. Therefore, the studies failed to take into account the differing circumstances of older, non-traditional and minority students. This type of study represents a gap in the literature that should be explored.

Kirkham and Ringelstein (2008) presented a conceptual framework for the Student Peer Assisted Mentoring (SPAM) program. The approach was based on a supplemental instruction model wherein students became involved as mentees or peer mentors under the supervision of academic leaders. These authors identified a number of benefits for mentors and mentees who participated in the program. Peer assisted learning is a term used to describe the situation where students teach other students. Peer tutoring is described as a more appropriate term, although less utilized, because of the informal nature of the relationship and the concern that the tutoring relationship between more and less advanced students may lead to the potential for the learning of inaccurate or inappropriate problem solving skills. The solution (Saunder, 1992), according to Kirkham and Ringelstein, is to include some form of supervision or monitoring of the peer tutoring activities. The positive effects described by Kirkham and Ringelstein as they referenced other studies were improved academic performance (Bidgood, 1992); positive differences in student performance and retention rates (Martin & Arendale, 1992). Additional research was conducted in Australia by researchers (Calder, 2004; Daley, 2004; Freeman & Kelton, 2004; Treston, 1999) examining various peer mentoring programs and their findings provide further evidence of the existence of benefits in terms of student performance, retention and satisfaction.

Kirkham and Ringlestein referenced another important outcome of peer involvement as described by Whitman and Fife (1988) as "to teach is to learn twice" and in effect leading to a better understanding of the topic by the peer mentor in the teaching process.

Peer Mentoring as a Factor in Social Engagement

Jacobi (1991) confirmed that much has been written on the importance of mentors in undergraduate education (e.g., Hughes, 1988; Lester & Johnson, 1981; Moore & Amey, 1988; Moses, 1989; Pounds, 1987; Rowe, 1989). "The professional literature, the popular press, and students themselves seem to agree that mentoring is a critical component of effective undergraduate education" (p. 505). Peer mentors show a stronger ability to provide psychosocial support characterized by "confirmation, emotional support, personal feedback, and friendship" (Terrion & Leonard, 2007, p. 150).

Mentoring by faculty and peers is utilized today in higher education as a retention model for undergraduate students (Jacobi, 1991; Budge 2006). Mentoring and student attrition have been associated with student retention particularly related to minority students (Davidson & Foster-Johnson, 2001). Students that feel academically and socially connected to other students and faculty at their institution are more likely to graduate compared to those who are not connected (Crisp & Cruz, 2009). This factor also aligns with the Social Constructivist worldview of the importance of connectedness with the college community.

Galbraith and James (2004) suggested that mentoring can decrease these negative experiences. In fact, the value of peer mentoring was highlighted over faculty and student relationships, as administrators in higher education have been forced to deal with budget cuts and increased faculty responsibilities. They described the peer mentoring relationship as a more experienced (second-year) college student with a less experienced (first-year) college student.

Gainen (2006) examined barriers to success of college students and noted that students majoring in science, math, and engineering (SME) had the greatest attrition rate. The difficulty of the introductory or gateway courses was explained as one of the primary reasons that students dropped out of college between the freshman and sophomore years. The conventional wisdom that these students are ill-prepared or that they lack the aptitude to succeed in these majors is being challenged. Gainen cited studies by Rawls (1991); Widnall (1988) that reported results that were not consistent with the previously held beliefs. Four factors were explored by Gainen (2006): college preparation; peer culture; the classroom climate; and the competitive, impersonal culture of many of these courses.

Hall and Davidson (2001) established an early warning system to alert faculty, counselors and student personnel specialists to academic or adjustment difficulties of students before it is too late to rectify the situation. They found that scores from the Survey of Academic Orientations (SAO) were predictive of first semester freshman grades. As a result of their investigation, they encouraged additional research looking at the relationship between SAO scores to other academic indexes including student retention.

Good (2000) conducted a study examining academic and interpersonal growth of peer mentors by analyzing comments in journals written during mentor's first quarter of tutoring and mentoring within a minority engineering program at a large land-grant university in the Southeast. In conclusion, 90% of the mentors experienced and noted in their journals the development of personal skills—communication, confidence, and identity. Specifically they noted growth in ease of social interaction and communication, development of responsibility and leadership skills and a sense of self-satisfaction and belonging.

Students of color (Native Americans, Blacks and Hispanics) who attend college on predominately White campuses, experience a heightened sense of ethnic isolation according to Seymour and Hewitt (1997) particularly those in science, mathematics, and engineering majors. "These students experienced doubt that they belonged, wondered if others judged them as incompetent, held back from seeking help or asking questions and were miserably lonely without a peer group with whom to share their experiences" (p. 362). Interpersonal gains experienced by the peer mentors were an unintentional side benefit of the study. The constant networking helped to develop better communication and social skills. The sense of openness was reported by a peer mentor to help him succeed during the rest of his academic career. Others reported the ability to balance more responsibilities. The peer mentors and mentees in this study were reported to gain a sense of self-satisfaction by becoming leaders and role models for other minority engineering students. The relationship extended beyond the intended purpose of assisting someone new to the profession to providing an exchange of benefits. The relationships formed were valuable in remaining active and interested in their engineering program.

Another important study by DeWar (2009) examined the self-reported experiences of Black, female, undergraduate students at a small predominantly White, Midwestern college in the U.S., and found several factors influencing success of Black women at predominantly White institutions. Emphasis was placed on early mentoring for students of color to help them to succeed at higher rates. College mentoring programs have shown to increase retention of students of color when partnered with role models that come from backgrounds similar to their own. The students responded to this aspect of peer mentoring in the current study.

Astin's (1984) theory of student development that is used in my study, takes on many forms, such as absorption in academic work, participation in extracurricular activities, and

interaction with faculty and other institutional personnel. In 1977, Astin investigated the student involvement phenomenon more intensively by studying the impact of college on a wide range of other outcomes. This longitudinal data study looked at more than 200,000 students and examined more than 80 different student outcomes, focused on several different types of involvement: place of residence, honors programs, undergraduate research participation, social fraternities and sororities, academic involvement, student-faculty interaction, athletic involvement, and involvement in student government. Astin stated that "the most important conclusion from this elaborate analysis was that nearly all forms of student involvement are associated with greater than average changes in entering freshman characteristics" (p. 524).

The specific changes were revealed as follows: those who lived in on-campus residence became less religious and more hedonistic. The on-campus residents showed a greater appreciation of the arts, liberalism, and interpersonal self-esteem as compared to the off-campus students. The students who participated in honors programs were more likely than other students to persist in college and to aspire to graduate and professional degrees. It was also reported that students who are deeply involved academically are less likely than average students to show increases in liberalism, hedonism, artistic interests, and religious apostasy or decreases in business interest. Astin also pointed out that the most important type of interaction as a predictor of college satisfaction was student to faculty interaction. Athletic involvement is another important connection to the campus community and serves to retain students through graduation. "Peer-group effects" was a term used in Astin's study to describe how involvement in student government served to change students' attitudes and behavior.

This strand of literature can be summed up by saying that college students are more open to understanding the world through different lenses as the result of interacting with peers from

various backgrounds. Peer mentoring has been shown as a successful way of assisting students to develop and learn from the experiences of others that they trust and feel connected. The conclusion of these studies provide further support for the social constructivist, social integration and social involvement theories discussed earlier in this study.

Needs-Based Academic Support Programs

Based on the studies conducted during the past several years, the relationship between "at risk" college students and mentoring is beneficial to address needs of students, heighten awareness of different needs of students based on demographic qualities and as a key factor in academic progress and social engagement.

Information about financial assistance and college accessibility is critical for economically challenged students who typically need more encouragement to consider applying to college and to realize that college is an attainable goal. Choy and Carroll (2003) reported that low-income students are more likely than their peers to have financial need that is unmet by aid; consequently, adding an extra burden to considering college. Paulsen and St. John (2002) also found that financial factors affected the types and locations of the institutions students selected to attend. Bedsworth, Colby, and Doctor (2006); Stitt-Gohdes (1997) reported that low income students need more information about academic requirements, and that while parental assistance was important, peer mentoring was more important. Engle and O'Brien (2007) found that institutions that have high graduation rates for low-income students maintain close personal contact with students, create supportive campus communities, maintain a focus on undergraduate education, and create a campus culture focused on retention and graduation (Kezar, 2009).

Affirmative Action Policies which began in the 1960s were put in place to inflate the numbers of minorities on selective college campuses and offer students the opportunity to earn

degrees from prestigious institutions where they otherwise would not have been considered for admissions. These policies were later challenged leading to the Supreme Court's 2003 ruling in the Michigan law school case. In upholding race-conscious admissions policies, the Supreme Court concluded that colleges should have the final say over whether any alternative or affirmative action would work for them and should feel free to reject any policy they view as not meeting their needs. The court's decision ensured that, for the foreseeable future, legal battles over affirmative action in admissions would be focused on the narrow question of whether any given college had taken its consideration of race too far (Schmidt, 2007).

As stated earlier, the Council for Opportunity in Education (COE) was established in 1981 to oversee TRIO programs. Prior to 1992, TRIO programs were officially known as Special Programs for Students from Disadvantaged Background. There were three original TRIO programs—Upward Bound established in 1964, Talent Search (1965), and Student Services (1968). The term TRIO (in all caps) has been retained although it is not an acronym or initialism but to avoid confusion. Educators used the word TRIO in 1968 to describe these student programs with the passage of the Student Support Services legislation. Since that time four additional programs have been added to the list of TRIO programs to include Educational Opportunity Centers Program (1972), Ronald E. McNair Post baccalaureate Achievement Program (1986), Training Program for Federal TRIO Programs Staff, and Upward Bound-Math Science Program (1990). An eighth program was added in conjunction with the 1998 amendments to the Higher Education Act of 1965. That program is known as the TRIO Dissemination Partnership Program.

The current TRIO programs were described in the Final Report on Satisfaction with TRIO Programs (U.S. Department of Education, 1999) as follows to award grants:

- **Educational Opportunity Centers (EOC).** Grants are awarded to institutions of higher education, organizations and agencies for programs to focus on assisting adults to enroll in postsecondary education by providing financial aid counseling and information on college admissions to qualified adults.
- **Ronald E. McNair Post baccalaureate Achievement (McNair).** Grants are only awarded to institutions of higher education for projects designed to prepare participants for doctoral studies through involvement in research and other scholarly activities. The purpose of the program is to increase graduate degree attainment of low-income, first-generation college students and individuals from other disadvantaged groups.
- **Student Support Services (SSS).** Grants are provided to institutions of higher education only to provide opportunities for academic development, assist students with basic college requirements, and motivate students toward the successful completion of their postsecondary education. The purpose is to increase college retention and graduation rates and attain the highest possible educational level.
- **Talent Search (TS).** This program gives grants to institutions of higher education as well as organizations, and agencies to identify and assist individuals from disadvantaged backgrounds who have the potential to succeed in higher education. This program encourages students to graduate from high school and also seeks to encourage high school dropouts to return and complete high school.
- **Upward Bound (UB).** Grants are provided to institutions of higher education, organizations, and agencies to provide fundamental support to participants in their preparation for college. This program is unique in that it provides pre-college assistance

to students from low-income families in which neither parent holds a bachelor's degree, and low income, first generation military veterans who are preparing to enter college.

- **Upward Bound Math and Science (UBMS).** Grants are provided to institutions of higher education, organizations, and agencies to strengthen the math and science skills of participating low-income, potential first-generation college students. The goal is to help students to excel in math and science fields and encourage them to pursue postsecondary degrees in math and science.
- **Training Program for Federal TRIO Programs.** Grants are provided to institutions of higher education, organizations, and agencies to enhance the skills and expertise of project directors and staff employed in the federal TRIO programs. Conferences, seminars, internships, workshops, or publication of manuals are listed as ways to conduct this training. Priorities are determined by the secretary of education.

My investigation of peer mentoring effects on academic success and social engagement of historically underserved college students includes students who have or are participating in a peer mentoring program which is affiliated with a TRIO type of program similar to those outlined above.

Summary

Numerous studies have been conducted to investigate aspects of college peer mentoring with proven favorable outcomes. The majority of the studies were conducted looking at white, traditional, full-time students at four year institutions. As I investigated the four strands of literature: (a) peer mentoring in college, (b) peer mentoring as a factor in academic success, (c)

peer mentoring as a factor in social engagement, and (d) needs-based academic support programs, the lack of focus on the needs of historically underserved became evident.

It was expressed that historically underserved students experience greater challenges in negotiating social and academic environments in college. One salient point that was made by Reddick (2006) was that educationally students need to connect at an early age and often to help them stay engaged and achieve their educational goals. The review of the literature for peer mentoring as a factor in social engagement was that many underserved students in math and science related majors were more hesitant to seek help and this had an impact on retention in those majors. The third strand of literature involving needs-based academic support served as a reminder of the number of targeted programs that secondary schools and universities have to expose historically underserved students to academia. These programs have been very helpful in assisting historically underserved students since the 1970s. Studies have shown that low income and first generation students need additional information about academic requirements. The common theme among all the strands of literature is that mentoring, in various forms, is a key element for student success. This research is focused on peer mentoring during the first two years of college for historically underserved students and the relationship of peer mentoring to academic success and social engagement.

CHAPTER 3

Methodology

The purpose of this study was to examine the relationship between peer mentoring, academic success and social engagement of second year college students at Southeast University (university pseudonym for the purposes of this research). This chapter begins with an explanation of the correlational research design, role of the researcher, and selection of participants. A description of the data collection and analysis procedures follows. This chapter concludes with a discussion of the reliability, validity, and generalizability of the study.

Explanatory Correlational Research Design

My study employed a correlational design. The rationale for using a correlational research design is that there is a need to determine the extent of a relationship between two or more variables (Creswell, 2009). These variables are peer mentoring, academic success and social engagement of historically underserved students. This explanatory research design is appropriate for my study because (a) I am looking at the relationship between three variables - not past or future performance of participants, (b) the data was collected at one point in time, (c) all participants' responses were analyzed as a group and (d) finally, I will make interpretations from the statistical test results (Creswell, 2012).

Role of the Researcher

My life experiences with mentoring have been at both ends of the spectrum with experiences that were extremely valuable and others that were of little value at all. The most valuable mentoring was from my early years through college from key individuals in my family and community, who served to encourage, motivate, caution, and listen to me along my journey.

It was not until I reached graduate school that I realized that the world was not as friendly and accommodating as I had experienced growing up.

It was in graduate school that I became acutely aware of my differences from my northern, upper class, Caucasian counterparts. For the first time in life, I did not feel that I belonged and had trouble finding my identity. I was one of three underrepresented racial/ethnic and geographic minorities in the first year master's degree program in Speech Language Pathology and Audiology at a large primarily White public university in the northeastern part of the United States. It was not a particularly welcoming environment for a southern African American young woman, to say the least. By the end of the first quarter, the other two racial/ethnic minority females left the program to attend other universities. I was too proud to leave and not conquer this apparent giant in my life so I decided to stick it out. I made a conscious decision to succeed in graduate school in spite of my perception that I was not treated the same as other students. As the result of my experiences, I am compelled to champion students who might otherwise leave the educational setting feeling disenfranchised.

I have remained true to my convictions over the years, and made it my goal to champion students who appear to have great, yet untapped, potential. Each position of leadership that I have held since that experience afforded me the opportunity to lift someone else up to a higher position and help them to believe in the possibilities of success—whatever that meant for that person.

One bias related to personal identity, experience, and values that I must deal with is the assumption that all underrepresented students share my experiences and need this type of championship or mentorship. This is considered in the literature as the tendency to be "self"-centric (O'Leary, 2004). My worldview during graduate school over thirty years ago may not be

the same as the worldview of underserved racial/ethnic students today. Therefore, their needs may also be different. Students who are in their twenties and thirties have had different life experiences than I have had in graduate school in the early 1980s. Therefore, they interact with the world differently, have different expectations and may not share the same identity crisis that I did at that stage in life.

Another bias is to be sure that I am directed by the literature and not my opinion when conducting this research and analyzing the data (Marshall & Rossman, 2011). I recognize the challenge of interpreting the responses of students from various racial/ethnic, religious, and social cultures that may differ from my perspective as an African American woman. I have to find a questionnaire that provides the type of information that will help students involved in a peer mentoring experience to aptly evaluate the quality of the relationship of mentoring to academic success and social engagement. I will need to give careful consideration to the types of questions to ask during interviews. These strategies will decrease the likelihood of making assumptions based on social identities and assuming too much tacit knowledge (Marshall & Rossman, 2011).

Participants

The population invited to participate in this study consisted of students who participated in a peer mentoring program at SE University that was designed for first generation, students of low socioeconomic status and/or underrepresented racial/ethnic groups to succeed in college and receive financial, academic and personal support that is needed to achieve their college goals. Students are eligible to participate in this program, which includes a peer mentoring component, after being admitted full-time to the university, dependent on parent(s) income whose income is 200% or less of federal poverty guidelines and if they do not have other resources to pay for

college. In addition, these students must meet citizenship requirements and other eligibility standards for federal financial aid programs. A large number of these students are categorized first generation college student and/or historically underserved racial/ethnic groups as described by the U.S. Census as African American, American Indian, Hispanic (non-white), Pacific Islanders. The database is maintained in the Student Success-Academic Counseling Office. The administrator for this office created a listserv to include all the students who participated in the peer mentoring program during the first year of college.

All 760 sophomores enrolled at SE University who participated in a peer mentoring program designed for first generation, racial/ethnic minority and lower socioeconomic status students during their first year of college (2011–2012) comprised the population for this study. Seven hundred sixty students received electronic communication from me to complete a questionnaire for this research study during a three week timeframe. One hundred thirty-eight second year college students completed the questionnaire and became the convenience sample for the study. A description of demographics related to the population and sample is included in Chapter IV.

Data Collection Procedures

I created a questionnaire using results of the review of the literature on peer mentoring, academic success, and social engagement. I also looked at established surveys that addressed some of the issues related to mentoring but no single source was found that completely addressed the independent and dependent variables of this study.

The questionnaire was created so that students could either select one, more than one or no response as warranted by the question. A Likert scale was utilized as the ordinal scale for some items on the questionnaire that measured peer mentoring, academic success, and social

engagement. Continuous variable are based on ranges of values for the variable (e.g., age of the respondents 18–20 years or 21–25 years). Nominal variables were assigned categories so that each category stands for the name of the category, but they have no implied order or value (e.g., ethnicity).

The questions were entered into the Qualtrics software program. Qualtrics is a data collection and analysis software program that was utilized because of the many features that appeal to researchers and respondents such as customized background and presentation of questions, email reminder messages, immediate feedback regarding the length of time before the survey is completed, ease in exporting the survey to Microsoft Word, Excel or SPSS (Qualtrics.com, 2013). One question was presented per page for a total of 30 questions including demographic questions.

An email was sent to the listserv to invite the students to complete the electronic questionnaire that was available using the Qualtrics survey software. Each prospective participant received written communication describing the study and the requirements for participation. Five subsequent emails were sent during the spring semester 2013 to request students complete the questionnaire over a three week timespan. In addition, thank you emails were sent intermittently along with congratulations to randomly selected recipients of token incentives. This method of communication was also the preferred method based on feedback from the peer mentoring program office. Strategies were suggested to obtain a greater response rate by sending weekly email reminders and offering small incentives (e.g., being entered into a raffle to receive a gift card, campus logo items). These methods proved to be successful with several new respondents each time a reminder or incentive was offered to encourage participation (Dillman, Smith, & Christian, 2009).

Ethical considerations were used to ensure that the students agreed to participate and were not coerced against their will. I maintained responsibility for all ethical standards and students were asked to complete an informed consent form before engaging in the research questionnaire (Creswell, 2009). See Appendix A for a copy of the IRB-approved consent form.

The requirements of the Institutional Review Board of North Carolina Agricultural and Technical State University and the participating southeastern university were followed by the researcher (see Appendix B for signed IRB Approval). Participant confidentiality was of utmost importance along with maintaining the data securely. Aliases were assigned to each student for confidentiality (Marshall & Rossman, 2011). The printed data was kept in a secure locked file cabinet and only I possessed the key to the cabinet. The electronic data was kept on an encrypted USB data port in the same secure cabinet. All data will be maintained for seven years.

After obtaining IRB approval from North Carolina Agricultural and Technical State University and Southeast State University, an electronic questionnaire was pilot tested with an independent group of sixteen students prior to being sent to all second year students who participated in the peer mentoring program. Feedback was provided and modifications were made accordingly to ensure that questions were clear and ordered appropriately for the greatest response rate. See Appendix C for a copy of the Peer Mentoring, Academic Success, and Social Engagement (PMASSE) questionnaire.

Survey responses were coded to maintain confidentiality so that only institutional officials had access to each person's identity. Students provided email addresses if they wanted to be considered for the small gifts. The student demographic data for the entire population of second year students who participated in the peer mentoring program was provided by the

institutional research office simultaneously to the administration of the questionnaire to confirm the information provided by the students.

Data Analysis Procedures

A total of 138 completed questionnaires were analyzed after deleting 100 incomplete questionnaires that provided little substantive feedback. The criteria used for deciding to include responses from an individual were that the student had to have completed at least 80% of the questions.

The independent variable (peer mentoring) and dependent variables (academic success and social engagement) and the control variables (demographic background, parental level of education, prior exposure to enrichment programs, socio-economic status and admissions information) were analyzed according to the research questions. The dependent variables (academic success and social engagement) were measured according to the perceived impact of peer mentoring. Academic success was also measured using questionnaire data collected from each student by the university.

Coding is a process of assigning numbers to the values or levels of each variable (Morgan et al., 2013). The data were coded for yes/no questions with 0 = No and 1 = Yes. Each variable for each participant occupied the same column in the Data Editor and each participant occupied only one line (row). This means that only one value can be recorded for each variable. The questions were worded such that students were directed to select one or more than one response or other when applicable. Questions were sometimes transformed and recoded to collapse categories before analyzing the data. All coding rules were applied consistently for all participants. High numbers/values were used for “strongly agree” and “More than . . .” and low numbers were used to code “strongly disagree” and “not at all.” The responses were uploaded

into SPSS for analysis. Descriptive statistics were run for each of the questions. Frequency distribution is a count of the number of times each score on a single variable occurs. Frequencies and measures of central tendency (mean and standard deviation) were calculated by SPSS and appropriate tables were created for all items on the PMASSE.

Inferential statistics for relationships among peer mentoring variables and academic success and social engagement variables. Inferential statistics were completed for categorical variables that have a few levels using crosstabulations with Fisher's Exact Test. This test was reported instead of chi-square because the sample size and/or relatively even split of the subjects did not always meet 80% of the cells greater than five (Morgan et al., 2013). To investigate whether peer mentoring has a relationship to academic success, crosstabulations or analysis of variance were conducted.

Reliability, Validity, and Generalizability of the Study

The reliability or degree of accuracy of the questionnaire used to collect the quantitative data in my study can be measured by collecting the same or similar set of information from each student participant under the same or similar conditions (Kumar, 2005). The lower the degree of 'error' in my instrument, the higher the reliability. Factors that affect the reliability of a research instrument are: the wording of the questions, the physical setting, the respondent's mood, the nature of interaction and the regression effect of an instrument (Kumar, 2005). I ensured the reliability of the questionnaire by administering it as a pilot study to two groups of students who were not be a part of the participant group and the responses were compared for reliability by looking for uniformity or standardization in what is being measured. The consistency indicated that the questionnaire provided the same results on repeated attempts (O'Leary, 2004).

Content validity of the questionnaire was established by ensuring that the items and questions in the study covered the full range of the relationship between peer mentoring and academic performance, and social engagement (Kumar, 2005). Content validity of this study was established by asking a panel of experts including members of the dissertation committee and an external survey expert employed by the research institution to judge the adequate representation and balance of items on the questionnaire. In addition, feedback from 16 individuals who completed the questionnaire during the pilot testing phase regarding the clarity of the questions and whether they felt that items on the questionnaire should be added or deleted was taken into consideration (Morgan, Leech, Gloeckner, & Barrett, 2013).

Generalizability or external validity means that the findings of the sample are directly applicable to a larger population (O'Leary, 2004). Generalizability focuses on whether lessons learned in the study are likely to be applicable in other settings or across populations. The indicator of generalizability is that researchers have provided detailed description of the research context and methods so that applicability can be determined by others reading the study (O'Leary, 2004). It will be difficult to establish generalizability from this study because the sample is taken from one university's peer mentoring program, the sample size may not be large enough to generalize the findings to other peer mentoring programs. Also peer mentoring programs may differ at other universities.

CHAPTER 4

Results

This chapter reports the results of the study. The data set included 138 usable sets of responses submitted from respondents who participated in the 2011–2012 Peer Mentoring Program at a southeastern university that will be referred to as SE University for the purposes of this research project. Participants were second year students who participated during their first year of college. One hundred thirty-eight second year college students completed the questionnaire replete with questions requiring them to reflect on the experiences of the first year of college.

The analysis of data utilized responses from a questionnaire developed by the researcher. This tool was developed after a review of the literature and not finding an established tool that examined the academic and social integration skills as perceived by college students who participated in a peer mentoring program during their first year of college. The questionnaire measures three general aspects of a student's college experience: (a) peer mentoring experience, (b) academic success, and (c) social engagement during the first year of college.

Descriptive Analysis of Demographic Data

Table 1 below represents a comparison of the students who responded to the questionnaire to the total possible respondents. Data for population was obtained from the institutional research office of SE University. SE University has an undergraduate population of 29,278 undergraduate students. Twelve percent of those students were eligible for a special program for qualified low-income students to graduate debt-free. It is evident that though my sample size is less than optimum, it is representative in many demographic aspects. As shown in Table 1, 138 students chose to respond to the gender question. The respondents were 80.4%

females while the males represented 19.6% in the study. The majority of the respondents (97.1%) were between the ages of 18–20 years old while 2.9% were between the ages of 21-25 years old.

Table 1

Demographic Characteristics of the Peer Mentoring Sample vs. Peer Mentoring Program Population (2011–12)

Demographic Characteristics	Sample (Peer Mentoring Questionnaire Respondents)		Population (Peer Mentoring Program)	
N	138		760	
	n	%	*n*	%
Gender				
Female	111	80.4	487	64.1
Male	27	19.6	268	35.3
Age				
18–20 yr. old	134	97.1	720	94.7
Other	4	2.9	6	0.8
Race/Ethnicity				
African American	62	44.9	322	42.4
Caucasian	55	39.9	195	25.7
Hispanic (non-white)	12	8.7	78	10.3
Other	9	6.5	165	6.5
Geographical origin – Region of the country				
North	10	7.2	-	-
South	103	74.6	-	-
East	18	13.0	-	-
West	1	0.7	-	-
Graduating High School Class Size				
Under 500 students	121	87.7	476	62.2
Over 1000 students	17	12.3	164	21.5

Table 1

(Cont.)

Demographic Characteristics	Sample (Peer Mentoring Questionnaire Respondents)		Population (Peer Mentoring Program)	
	n	%	*n*	%
First Generation College				
Yes	29	21.0	318	41.8
No	109	79.0	408	53.7
Unknown			28	3.7
Father's Highest Education				
Less than high school	4	3.7	-	-
High school diploma or GED	18	16.7	-	-
Some college	15	13.9	-	-
College Graduate	44	31.9	-	-
Postsecondary coursework or degree	27	19.6	-	-
Missing	*30*	*21.7*	-	-

The breakdown of region of the country that students identify with was as follows: 74.6% were from the south, 13% were from the east, 7.2% were from the north and 0.7% from the west, while 4.3% of the students indicated other locations (e.g., international or the Midwest). This value could not be compared to the total population because the institutional data office does not capture the students by the north, south, east and west regions. Instead they capture permanent regions by state. Less than 30% of students participated in enrichment programs prior to entering college as follows: 8.7% participated in Talent Search, 1.4% participated in Upward Bound, 20.3% participated in Project SEU, and 1.4% participated in Area Health Education Centers (AHEC) programs. The size of the graduating class for 87.7% of respondents was less than 500 students while 12.3% graduated from high schools of over 1,000 students.

Twenty-one percent of the students were first generation college students while 31.9% of the students reported fathers or father figures having college degrees and 37.7% of mothers or mother figures having college degrees. The university's definition of first generation college student is a student without a least one parent who received a four year college degree. The students meeting this criterion were able to participate in the program that supports the peer mentoring program.

In summary, the data revealed that the respondents to the questionnaire were largely female students between the ages of 18 to 20 years old. They identified their primary residence as southern and graduated from high school with a class size of fewer than 500 students and the majority of them did not participate in pre-college enrichment programs. These findings were somewhat consistent with the total population. In addition, race/ethnicity distribution of both groups was similar for African American, Caucasian, Hispanic (non-White) and other. However, fewer of the respondents identified themselves as first generation wherein twice as many of the population said that they were first generation. Comparative data was not available for father and mother's highest education.

Descriptive Analysis of Peer Mentoring Experience Variables

Twelve questions were asked on the questionnaire to gather students' perspectives on their peer mentoring experience during their first year of college. The questions were designed to address a number of the key factors cited in the literature as having an impact on the peer mentoring relationship. These factors included the agreement at the outset, impressions of the program and mentor, frequency of communication, nature of communication, mentor's background characteristics, important descriptors of the mentor, benefits of the relationship, and finally their continual commitment to the peer mentoring program. The following tables present

frequency distributions for each item measuring the peer mentoring experience. Also included are tables reporting measures of central tendency and spread for appropriate items on the questionnaire. Central tendencies were only included for items with continuous variables.

Data in Table 2 shows if respondents indicated yes or no regarding items they and their mentors agreed upon at the beginning of the mentoring relationship: (a) 30.4% of respondents responded yes to the item regarding how often they would meet each week; (b) 76.8% of the respondents said yes on which method(s) of communication they would use; (c) 18.1% of the respondents said yes on the changes that might occur during the first year of the peer mentoring relationship; and (d) 46.4% of the respondents said yes on addressing the mentees' needs to ensure success in college. Fourteen and one-tenth percent of the respondents indicated that they did not agree upon any of the issues at the outset of the program. Specifically, 69.6% of the respondents answered no when asked if they and their mentors had agreed on how often they would meet each week; 81.9% indicated no regarding an agreement on the changes that might occur during the first year of the peer mentoring relationship; and 53.6% said no on the addressing the mentees needs to ensure success in college. Finally, 85.5% of the respondents indicated that they did not agree that none of the options were agreed upon at the outset of the relationship.

These data reveal that the contract that the mentor and mentee agreed upon at the outset of the experience was less clear for meeting frequency and changes that might occur during the first year while method(s) of communication was much clearer. The respondents were split almost equally regarding the agreement to address the mentee's needs to ensure success in college and another 14.5% did not recall having an agreement on any of the above.

Table 2

Frequency Distribution: Which of the Following Did You and Your Mentor Agree Upon at the Outset of the Mentoring Relationship?

	No	Yes	Total
	n %	*n* %	*n* %
How often you would meet each week (e.g., check in every Monday).	96 69.6	42 30.4	138 100
Which method(s) of communicating you would use (e.g., face-to-face, phone, internet social media).	32 23.2	106 76.8	138 100
Changes that might occur during the first year of the peer mentoring relationship.	113 81.9	25 18.1	138 100
Addressing your (mentee) needs to ensure success in college.	74 53.6	64 46.4	138 100
None of the above	118 85.5	20 14.5	138 100

As Table 3 shows, 67.4% of respondents indicated that they strongly agree or somewhat agree that they had a clear understanding of the peer mentoring program at the beginning of the program, while 22.5% strongly disagreed or somewhat disagreed and 10.1% were neutral. Seventy-one percent of respondents strongly agreed or somewhat agreed that their mentor was very knowledgeable about things that would help them to succeed in college. Another 13.7% strongly disagreed or somewhat disagreed that their mentor was knowledgeable about things that would help them succeed in college and 15.2% were neutral. When asked if their mentor demonstrated the desire to share his/her knowledge with them, 74.7% strongly agreed or somewhat agreed and 12.3% of students strongly disagreed or somewhat disagreed. The remaining 13.0% were neutral. According to the data, 65.2% of the respondents strongly agreed or somewhat agreed that the mentor was available when they needed them and 13.7% strongly

disagreed or somewhat agreed and an additional 21.0% remained neutral. When asked about having a trusting mentoring relationship, 54.3% of the respondents strongly agreed or somewhat agreed, while 19.6% strongly disagreed or somewhat disagreed and 26.1 were neutral. Respondents strongly agreed or somewhat agreed that expectations were clearly communicated 52.9% of the time and 24.6% strongly disagreed or somewhat disagreed while 22.5% were neutral. Forty-four and nine-tenths percent of respondents strongly agreed or somewhat agreed that they took full advantage of the mentoring program, 41.3% of respondents indicated that they strongly disagreed or somewhat disagreed that they took full advantage of the mentoring program and 13.8% were neutral. Sixty and nine-tenths percent of the respondents strongly agreed or somewhat agreed that the amount of communication was appropriate, 26.8% of respondents strongly disagreed or somewhat disagreed and 12.3% were neutral. The type of communication with the mentor was appropriate by 85.1% of respondents who strongly agreed or somewhat agreed and 6.6% who strongly disagreed or somewhat disagreed and 8.0% were neutral. Respondents were questioned about the focus of the program on their needs and 68.9% of the respondents strongly agreed or somewhat agreed, 12.3% strongly disagreed or somewhat disagreed and 18.8% were neutral. The data showed that respondents strongly agreed or somewhat agreed with having a clear understanding of the program, that the mentors were very knowledgeable about things that would help them to be successful in college and were available and used the appropriate amount and type of communication and the focus was on them during the program. On the other hand, respondents were more evenly distributed on both extremes in their response to taking full advantage of the program and they responded more neutrally regarding mentor having a trusting relationship.

Table 3

Frequency Distribution: Reflect on Your Overall Impressions of Your Peer Mentoring Experience

	Strongly disagree	Somewhat disagree	Neutral	Some what agree	Strongly agree	Missing data	Total
	n %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %
I had a clear understanding of the Peer Mentoring Program at the beginning of the program.	11 8.0	20 14.5	14 10.1	62 44.9	31 22.5	0 0	138 100
My mentor was very knowledgeable about things that would help me to succeed in college.	5 3.6	14 10.1	21 15.2	48 34.8	50 36.2	0 0	138 100
My mentor demonstrated the desire to share his/her knowledge with me.	9 6.5	8 5.8	18 13.0	40 29.0	63 45.7	0 0	138 100
My mentor was available when I needed him/her.	9 6.5	10 7.2	29 21.0	33 23.9	57 41.3	0 0	138 100
My mentor and I had a trusting relationship.	15 10.9	12 8.7	36 26.1	34 24.6	41 29.7	0 0	138 100
Expectations were clearly communicated	10 7.2	24 17.4	31 22.5	41 29.7	32 23.2	0 0	138 100
I took full advantage of the peer mentoring program.	16 11.6	41 29.7	19 13.8	37 26.8	25 18.1	0 0	138 100
The amount of communication with my mentor was appropriate	15 10.9	22 15.9	17 12.3	40 29.0	44 31.9	0 0	138 100
The type of communication with my mentor was appropriate	6 4.4	3 2.2	11 8.0	53 38.4	64 46.7	1 .7	138 100
The focus was on my needs during the program.	8 5.8	9 6.5	26 18.8	40 29.0	55 39.9	0 0	138 100

During the first semester of the first year, 2.2% of respondents communicated more than one time per week, 10.9% communicated about weekly, 36.2% indicated having communicated a few times per week, 22.5% of the respondents indicated that they communicated with their

mentors about once per month, while 36.2% indicated having communicated a few times per week (see Table 4). Eighteen and eight-tenths percent communicated less than once per month and 9.4% did not communicate at all (see Table 4). During the second semester of the first year 1.4% of respondents communicated more than one time per week, 7.2% communicated about weekly, 21.0 communicated a few times per week, 25.4% communicated about once per month, 21.0 communicated less than once per month and 23.9% did not communicate at all (see Table 4).

Table 4

Frequency Distribution: Thinking about Your First and Second Semester of Your First Year College on Average How Often Did You and Your Mentor Communicate by Any Means?

	Not at all	Less than once a month	About once a month	A few times a week	About weekly	More than one time a week	Total
Semester	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %
First	13 9.4	26 18.8	31 22.5	50 36.2	15 10.9	3 2.2	138 100
Second	33 23.9	29 21.0	35 25.4	29 21.0	10 7.2	2 1.4	138 100

The respondents who did not communicate at all increased by 14.5% from the first to the second semester. Only 3.6% of the respondents both semesters reported having communicated more than one time per week. A large percentage of the respondents showed a decrease in communication from the first to the second semester as they assessed communication on a monthly and weekly basis.

Table 5 presents frequency results for the questionnaire item related to interpersonal communication between mentor and mentee. When respondents were asked about the number of

times they had conversations with mentors about ideas from readings or classes outside of class, 61.6% of them never had these discussions, while 26.1% discussed them once or twice, 10.1% discussed these ideas three to five times and 2.2% more than five times. When asked about serious conversations with peer mentor about religious beliefs, 85.5% of them never did, 10.9% had serious conversations once or twice, 2.9% had these conversations three to five times and 0.7% of respondents had them more than five times. In addition, they responded similarly to the question regarding political opinions with 88.4% never discussing political opinions, 5.8% discussed political opinions once or twice, 5.8% three to five times and no responses for more than five times. Another topic of conversation was regarding personal values with 49.3% never having these conversations, 31.9% once or twice, 14.5% three to five times and 4.3% more than five times. The overwhelming response to this question indicated that conversations were very limited regarding religious beliefs, political opinions.

Table 5

Frequency Distribution: In Your Experience in the Peer Mentoring Program in Your First Year, about How Many Times Did You Do Each of the Following?

	Never	Once or twice	3-5 times	More than 5 times	Missing data	Total
	n %	*n* %	*n* %	*n* %	*n* %	
Discussed ideas from your readings or classes with your peer mentor outside of class	85 61.6	36 26.1	14 10.1	3 2.2	0 0	138 100
Had serious conversations with your peer mentor about religious beliefs	118 85.5	15 10.9	4 2.9	1 0.7	0 0	138 100
Had serious conversations with your peer mentor about political opinions	122 88.4	8 5.8	8 5.8	0.0	0 0	138 100
Had serious conversations with your peer mentor about personal values	68 49.3	44 31.9	20 14.5	6 4.3	0 0	138 100

As Table 6 indicates, respondents were asked to attribute importance to the background characteristics of a mentor. Twenty-four and six-tenths percent of them indicated that age was not at all important while 27.5% rated age as slightly important, 34.8% rated age moderately important and 13.0% rated it very important.

Table 6

Frequency Distribution: For You Personally, How Important is Each of the Following Background Characteristics of a Mentor?

	Not at all important	Slightly important	Moderately important	Very important	Missing data	Total
	n %	*n* %	*n* %	*n* %		
Age	34 24.6	38 27.5	48 34.8	18 13.0	0	138 100
Race/Ethnicity	62 44.9	32 23.2	29 21.0	15 10.9	0	138 100
Major	25 18.1	19 13.8	41 29.7	53 38.4	0	138 100
Gender	44 31.9	29 21.0	42 30.4	23 16.7	0	138 100
Economic status	93 67.9	24 17.5	14 10.2	6 4.4	1	138 100
Geographical origin (e.g., state or region)	95 69.3	24 17.5	14 10.2	4 2.9	1	138 100
Area of origin (e.g., urban, rural, suburban)	97 70.3	28 20.3	10 7.2	3 2.2	0	138 100
Physical appearance (e.g., looks like you)	109 79.0	22 15.9	5 3.6	2 1.4	0	138 100

Race was not at all important to 44.9% of respondents, slightly important to 23.2% and moderately important to 21.0% and very important to 10.9% of respondents. The reverse was true for the importance of a mentor having the same major. The respondents rated the major as not at all important for 18.1% of them, 13.8% rated that major as slightly important, 29.7% rated the major as moderately important and 38.4% rated the major as very important. Gender was

another characteristic that respondents rated as follows: 31.9% felt that gender was not at all important, 21.0% indicated that it was slightly important, 30.4% indicated moderately important and 16.7% rated gender as very important.

Economic status was rated by 67.9% of respondents as not at all important, 17.5% rated economic status as slightly important, 10.2 rate it as moderately important and 4.4% of respondents indicated that it is very important. Geographical origin was rated by 69.3% of respondents as not at all important, slightly important for 17.5%, moderately important for 10.2% of respondents and very important to 2.9% of respondents. Area of origin was not at all important to 70.3% of respondents, slightly important to 20.3%, moderately important to 7.2% and very important to 2.2% of respondents. Finally, physical appearance was rated as not at all important to 79.0% of respondents, slightly important to 15.9% of respondents, moderately important to 3.6% and very important to 1.4% of respondents.

As Table 6 shows, the only background characteristic that was rated as very important for the mentor was to have his or her major, with 68.1% of the respondents saying this was moderately or very important. The characteristics with the highest percentages being 'not important at all' included physical appearance at 79.0%, area of origin 70.3%, economic status at 67.4%, and race/ethnicity 62%. Gender and age were rated almost equally across the scale.

Respondents were asked to rank order descriptors from one to nine for what they expect from a peer mentor (see Table 7). The descriptors ranked number one by respondents as follows: approachable at 45.4%; available at 10.0%; dependable at 8.5%; friendly at 18.5%; intelligent at 2.3%; thoughtful at 2.3%; trustworthy at13.1%. Descriptors ranked number two by respondents were: approachable at 25.6%; available at 19.2%; dependable at 13.1%; friendly at 25.4%; intelligent at 5.4%;; organized at 1.5%; thoughtful at 0.7%; trustworthy at 10.0%. Descriptors

ranked number three by respondents were: approachable at 13.8%; available at 24.6%; dependable at19.2%; friendly at 19.2%; intelligent at 6.2%; intuitive at 0.8%; organized at 2.3%; thoughtful at 0.7%; and trustworthy at 13.1%.

Table 7

Frequency Distribution: Please Think about What You Expect from a Peer Mentor and Order the Following Descriptors

	1	2	3	4	5	6	7	8	9	Missing data	Total
	n %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %
Approachable	59 45.4	32 25.6	18 13.8	9 6.9	8 6.2	3 2.3	1 0.7	– –	– –	8 5.8	138 100
Available	13 10.0	25 19.2	32 24.6	18 13.8	15 11.5	14 10.8	8 6.2	3 2.3	2 1.5	8 5.8	138 100
Dependable	11 8.5	17 13.1	25 19.2	38 29.2	22 16.9	8 6.2	8 6.2	1 0.8	– –	8 5.8	138 100
Friendly	24 18.5	33 25.4	25 19.2	16 12.3	19 14.6	7 5.4	3 2.3	3 2.3	– –	8 5.8	138 100
Intelligent	3 2.3	7 5.4	8 6.2	13 10.0	18 13.8	23 17.7	23 17.7	25 19.2	10 7.7	8 5.8	138 100
Intuitive	– –	– –	1 0.8	3 2.3	6 4.6	13 10.0	27 20.8	43 33.1	37 28.5	8 5.8	138 100
Organized	– –	2 1.5	3 2.3	6 4.6	7 5.4	13 10.0	17 13.1	25 19.2	57 43.8	8 5.8	138 100
Thoughtful	3 2.3	1 0.7	1 0.7	14 10.8	18 13.8	36 27.7	25 19.2	19 14.6	13 10.0	8 5.8	138 100
Trustworthy	17 13.1	13 10.0	17 13.1	13 10.0	17 13.1	13 10.0	18 13.8	11 8.5	11 8.5	8 5.8	138 100

Descriptors ranked number four by respondents were: approachable at 6.9%; available at 13.8%; dependable at 29.2%; friendly at 12.3%; intelligent at 10.0%; intuitive at 2.3%; organized at 4.6%; thoughtful at 10.8%; trustworthy at 10.0%. Descriptors ranked number five by respondents were: approachable at 6.2%; available at 11.5%; dependable at 16.9%; friendly at 14.6%; intelligent at 13.8%; intuitive at 4.6%; organized at 5.4%; thoughtful at 13.8%;

trustworthy at 13.1%. Descriptors ranked number six by respondents as follows: approachable at 2.3%; available at 10.8%; dependable at 6.2%; friendly at 5.4%; intelligent at 17.7%; intuitive at 10.0%; organized at 10.0%; thoughtful at 27.7%; trustworthy at 10.0%.

As shown on Table 8 the descriptors ranked number seven by respondents included: approachable – 0.7%; available – 6.2%; dependable – 6.2%; friendly – 2.3%; intelligent – 17.7%; intuitive – 20.8%; organized – 13.1%; thoughtful – 19.2%; trustworthy – 13.8%. Descriptors ranked number eight by respondents included: available – 2.3%; dependable – 0.8%; friendly – 2.3%; intelligent – 19.2%; intuitive – 33.1%; organized – 19.2%; thoughtful – 14.6%; trustworthy – 8.5%. Descriptors ranked number nine by respondents included: available – 1.5%; intelligent – 7.7%; intuitive – 28.5%; organized – 43.8%; thoughtful – 10.0%; trustworthy – 8.5%.

The descriptors that the respondents ranked highest were approachable, available and friendly. This was concluded from the combined top three percentages which had more than 50% of respondents rank them highest as follows: approachable (84.8%), friendly (63.1%) and available (53.8%).The descriptors that the respondents ranked lowest were intuitive (82.4%), organized (77.1%) and thoughtful (44.8%). Table 8 presents measures of central tendency and spread for items measuring the peer mentoring experience. The measures of central tendency were used on this continuous variable to determine the mean and standard deviation for each of the values that students rated. The codebook for this was 1 = highest ranked to 9 = the lowest ranked for the expectations of students for a peer mentor. Therefore, the characteristics with the lowest mean scores that show what students expected most were: approachable ($M = 2.14$, $SD = 1.41$), friendly ($M = 3.16$, $SD = 1.77$) and available ($M = 3.75$, $SD = 1.93$). The mean and

standard deviation for those mentor characteristics that were expected least were intuitive (*M* = 7.61, *SD* = 1.32), organized (*M* = 7.55, *SD* = 1.77) and thoughtful (*M* = 6.26, *SD* = 1.72).

Table 8

Measures of Central Tendency and Spread for Expectations of Peer Mentor

	M	*SD*
Approachable	2.14	1.407
Available	3.75	1.933
Dependable	3.80	1.597
Friendly	3.16	1.769
Intelligent	5.94	2.049
Intuitive	7.61	1.315
Organized	7.55	1.774
Thoughtful	6.26	1.723
Trustworthy	4.78	2.527

Note. Values are ranked with 1= highest ranked to 9 = the lowest ranked.

Table 9 displays descriptors that the respondents saw in the mentors during the peer mentoring experience. Mentors were perceived as not at all or to a minimal extent approachable by 16.1% of respondents and to a moderate or large extent by 84.0% of respondents. Mentors were perceived as not at all or to a minimal extent available by 29.9% of respondents and to a moderate or large extent by 70.1% of respondents. Mentors were perceived as not at all or to a minimal extent dependable by 26.3% of respondents and to a moderate or large extent by 73.7% of respondents. Mentors were perceived as not at all or to a minimal extent friendly by 11.7% of respondents and to a moderate or large extent by 88.3% of respondents. Mentors were perceived as not at all or to a minimal extent intelligent by 11.6% of respondents and to a moderate or large extent by 88.4% of respondents. Mentors were perceived as not at all or to a minimal extent intuitive by 24.1% of respondents and to moderate or large extent by 75.9% of respondents.

Table 9

Frequency Distribution: To What Extent Did Each of the Following Describe Your Peer Mentor during Your First Year of College?

	Not at all	To a minimal extent	To a moderate extent	To a large extent	Missing Data	Total
	n %	*n* %	*n* %	*n* %		
Approachable	9 6.6	13 9.5	33 24.1	82 59.9	1	138 100
Available	14 10.2	27 19.7	43 31.4	53 38.7	1	138 100
Dependable	13 9.5	23 16.8	36 26.3	65 47.4	1	138 100
Friendly	7 5.1	9 6.6	26 19.0	95 69.3	1	138 100
Intelligent	8 5.8	8 5.8	42 30.7	79 57.7	1	138 100
Intuitive	13 9.5	20 14.6	51 37.2	53 38.7	1	138 100
Organized	15 11.1	28 20.7	44 32.6	48 35.6	3	138 100
Thoughtful	14 10.2	21 15.3	36 26.3	66 48.2	1	138 100
Trustworthy	13 9.6	22 16.2	36 26.5	65 47.8	2	138 100

Mentors were perceived as not at all or to a minimal extent organized by 31.8% of respondents and to moderate or large extent by 68.2% of respondents. Thoughtful as a characteristic was perceived by 25.5% of respondents as not at all or to a minimal extent and 74.5% to a moderate or large extent. In summary, mentors were rated highest for being approachable, friendly, and intelligent followed by intuitive, dependable and thoughtful. The characteristic that respondents perceived lowest was organized.

Respondents were asked to describe their peer mentoring experience during the first year of college after responding to the preceding question to rank order expectations of a mentor (see Table 9). The respondents suggested that they experienced the mentors being approachable as follows: 6.6% indicated not at all, 9.5% indicated to a minimal extent, 24.1% indicated to a moderate extent and 59.9% indicated to a large extent. These same respondents indicated the following regarding the availability of the mentor: 10.2% indicated not at all, 19.7% indicated to a minimal extent, 31.4% indicated to a moderate extent and 38.7% indicated to a large extent. When asked about dependability of the mentor, they responded as follows: 9.5% indicated not at all, 16.8% indicated to a minimal extent, 26.3% indicated to a moderate extent and 47.4% indicated to a large extent. The respondents felt that mentors were friendly accordingly: 5.1% indicated not at all, 6.6% indicated to a minimal extent, 19.0% indicated to a moderate extent and 69.3% indicated to a large extent. Intelligence was rated as follows: 5.8% indicated not at all, 5.8% indicated to a minimal extent, 30.7% indicated to a moderate extent and 57.7% indicated to a large extent. Intuitive was rated as follows: 9.5% indicated not at all, 14.6% indicated to a minimal extent, 37.2% indicated to a moderate extent and 38.7% indicated to a large extent. When asked if the mentor was organized, the respondents indicated the following: 11.1% indicated not at all, 20.7% indicated to a minimal extent, 32.6% indicated to a moderate extent and 35.6% indicated to a large extent. The perception that the mentor was thoughtful was evaluated as follows: 10.2% indicated not at all, 15.3% indicated to a minimal extent, 26.3% indicated to a moderate extent and 48.2% indicated to a large extent. Finally, trustworthiness was rated as follows: 9.6% indicated not at all, 16.2% indicated to a minimal extent, 26.5% indicated to a moderate extent and 47.8% indicated to a large extent. It was evident that respondents rated all of the characteristics highest on the moderate to large extent level with all

of the characteristics above 50% using the combined percentages. The very highest were intelligent (88.4%), friendly (88.3%), and approachable (84%). The lowest rated descriptors were available (29.9%), dependable (26.3%) and organized (26.3%).

Table 10 presents measures of central tendency and spread for items describing the peer mentor during the first year of college. The measures of central tendency support the frequency distribution by confirming that the mean scores and standard deviation (M, SD) were consistent. The mean descriptors that students indicated most were friendly (3.40, 0.84), intelligent (3.40, 0.84), and approachable (3.37, 0.91). The mean descriptors that were rated least were organized (2.92, 1.00), available (2.98, 1.00) and intuitive (3.05, 0.96). There was very little variation in mean scores.

Table 10

Central Tendency and Spread: Descriptors of Peer Mentor

	M	*SD*
Approachable	3.37	0.907
Available	2.98	0.999
Dependable	3.11	1.008
Friendly	3.52	0.832
Intelligent	3.40	0.844
Intuitive	3.05	0.957
Organized	2.92	1.004
Thoughtful	3.12	1.017
Trustworthy	3.12	1.006

Respondents were asked to respond as to whether peer mentoring aided them in five key decisions during the first year of college (see Table 11). Seventeen and four-tenths percent of respondents said that peer mentoring aided them in selecting a major, 15.2% indicated that it

maximized their GPA, 58.7% of the respondents said that it helped them navigate the university academic environment and 49.3% said that it helped them to navigate the university social environment. As for taking advantage of university resources, 55.8% of respondents indicated that the peer mentoring experience aided them. Respondents expressed that the peer mentoring program aided them most in navigating the university academic environment and taking advantage of university resources followed by navigating the university social environment during the first year of college.

Table 11

Frequency Distribution: Has Peer Mentoring Aided You in Any of the Following Ways during College?

	No	Yes	Missing Data	Total
	n %	*n* %	*n* %	
Selection of a major	114 82.6	24 17.4	0	138 100
Maximizing your GPA	117 84.8	21 15.2	0	138 100
Navigating the university academic environment	57 41.3	81 58.7	0	138 100
Navigating the university social environment	70 50.7	68 49.3	0	138 100
Taking advantage of university resources	61 44.2	77 55.8	0	138 100
Other activities or resources	132 95.7	6 4.3	0	138 100

When respondents were questioned about the length of time that they participated in the peer mentoring program, 30.4% of them indicated more than 12 months, while 44.9% of them

said six to twelve months, 13.8% said three to six months, 4.3% of them said one-three months and 6.5% less than one month (see Table 12). The majority of the respondents participated in the peer mentoring program more than six months with a third of them exceeding twelve months.

Table 12

Frequency Distribution: In Total, How Long Did/Have You Participate(d) in the Peer Mentoring Program, as Mentee and/or Mentor?

	Less than one month	1–3 months	3–6 months	6-12 months	More than 12 months	Missing data	Total
	n %	*n* %	*n* %	*n* %	*n* %	*n* %	*n* %
How long did you participate in the peer mentoring program	9 6.5	6 4.3	19 13.8	62 44.9	42 30.4	0	138 100

According to the respondents, 5.1% of them are still participating in the peer mentoring program as a mentee, while 33.6% are mentors, 2.2% are program assistants and 58.7% are no longer participating in the program (see Table 13). A very small percentage of respondents are still participating in the peer mentoring program as mentees since the program is intended for first year students to participate as mentees. It was noted that 35.8% of respondents are still participating as mentor primarily and a small percentage as program assistants. On the other hand, over 50% are no longer participating in the program in any capacity.

As students reflected on the activities that they did as the result of their mentor's encouragement during the first year, 38.8% attended an art exhibit, play, dance, music, theatre, or other performance; 30.8% exercised or participated in physical fitness activities and 19.3% participated in activities to enhance their spirituality (see Table 14). Twenty-eight and nine-tenths percent of the respondents examined the strengths and/or weaknesses of their own views

on a topic or issue, 21.6% tried to better understand someone else's views by imagining how an issue looks from another's perspective. Thirty-two and one-tenth percent learned something that changed the way they understand an issue or concept. Forty-three and three-tenths percent joined social organization and 43.7% participated in community service activities.

Table 13

Frequency Distribution: If You are Still Participating in the Peer Mentoring Program, in What Capacity Are You Participating?

	n %
Mentee	7 5.1
Mentor	46 33.6
Program Assistant	3 2.2
No longer participating	81 59.1

Table 14

Frequency Distribution: Did You Do This Activity as the Result of Your Mentor Encouraging You to Do it during Your First Year of College?

	Yes	No	Missing data	Total
	n %	*n* %	*n* %	*n* %
Attend an art exhibit, play, dance, music, theatre, or other performance	52 38.8	82 61.2	4	138 100
Exercise or participate in physical fitness activities	41 30.8	92 69.2	5	138 100
Participate in activities to enhance your spirituality	26 19.3	109 79.0	3	138 100
Examine the strengths and/or weaknesses of your own views on a topic or issue	39 28.9	96 71.1	3	138 100

Table 14

(Cont.)

	Yes	No	Missing data	Total
	n %	*n* %	*n* %	*n* %
Try to better understand someone else's views by imagining how an issue looks from his or her perspective	29 21.6	105 78.4	4	138 100
Learn something that change the way you understand an issue or concept	43 32.1	91 67.9	4	138 100
Join a social organization (e.g., Greek sorority/fraternity, special interest clubs)	58 43.3	76 56.7	4	138 100
Participate in community service activities	59 43.7	76 56.3	3	138 100

Descriptive Analysis of Academic Success

Five questions were asked to gain insight regarding the student's perceptions about their academic success. One of the questions addressed the importance that students placed on participating in academic activities (e.g., attending class, studying alone or in a small group, and attend non-required lectures or seminars). Another question focused on students' study habits, particularly regarding the number of hours, on average, during your first semester of your first year that they studied on weekdays and weekends? In addition, students were asked to reflect on the end of their first year, to recall how many credit hours had they successfully completed at your university without including AP (advanced placement) credits. Finally, they were asked about their GPA at the end of the first year of college. The following tables present frequency distributions for each item measuring the academic success. Also included are measures of central tendency and spread for appropriate items.

The responses shed light on the importance that these respondents place on attending class, study habits and attendance at non-required lectures or seminars (see Table 15). Ninety-seven and one-tenth percent of students suggested that it is very important or moderately important to attend class; while merely 2.9% of respondents felt that it was slightly important to not at all important to attend class. Eighty-four and eight-tenths percent place high importance on studying alone, when combining very important and moderately important. Studying in a small group was very important to moderately important to 48.6% of respondents and it was slightly important to not at all important to 51.1%. When asked about attending non-required lectures or seminars, 56.5% of the respondents indicated that it was not at all important to slightly important and 43.5% indicated that it was moderately important to very important. Respondents clearly indicated importance of class attendance and studying alone while they seemed more evenly split between studying in small groups and attending non-required lectures or seminars. Consequently, the relationship between GPA and studying in small groups and attending non-required lectures was tested using crosstabulations with Fisher's Exact Test (p values = 2 sided). It was revealed that there was no statistically significant relationship between GPA at the end of the first year and studying in small groups ($p = 0.27$) and GPA at the end of the first year and attending non-required lectures or seminars ($p = 0.40$). Therefore, no further analysis was completed for these assumed aspects of academic success.

The responses to the inquiry regarding the number of hours that students studied on weekdays and weekends (see Table 16) was recoded into a continuous variable so that measures of central tendency could be calculated for the mean and standard deviations. They studied an average of 2.89 hours each day during the weekdays of first year and an average of 3.89 hours of study during each weekend of the first year of college.

Table 15

Frequency Distribution: In Your First Year of College, How Important Did You Feel it was to Participate in the Following Academic Activities?

Academic Activity	Not at all important *n* %	Slightly important *n* %	Moderately important *n* %	Very important *n* %	Missing data *n* %	Total
Attend Class	3 2.2	1 0.7	10 7.2	124 89.9	-	138 100
Study alone	4 2.9	17 12.3	54 39.1	63 45.7	-	138 100
Study in a small group*	21 15.3	49 35.8	52 37.7	15 10.9	-	138 100
Attend non-required lectures or seminars*	34 24.6	44 31.9	41 29.7	19 13.8	-	138 100

* These variables did not measure academic success as expected; therefore, they will not be carried forward for analysis.

Table 16

Central Tendency and Spread: Hours of Study on Weekdays and Weekend

	M	*SD*
Hours studied – **weekdays** of first year	2.89	1.44
Hours studied – **weekends** of first year	3.89	1.70

The number of credit hours earned and the grade point average variables were recoded to make them continuous variables. Table 17 below shows that the average number of credit hours earned at the end of the first year was 25.46 hours and the average grade point average was 3.07 at the end of the first year of college for the respondents to the questionnaire.

Table 17

Central Tendency and Spread: Credit Hours Earned and GPA after First Year

	M	*SD*
Credit hours	25.46	6.38
Grade Point Average (GPA)	3.07	0.57

Descriptive Analysis of Social Engagement

Three questions were asked regarding students engagement in social activities. These questions focused on the aspects of college that are not required and reflect on their individual interests. These activities give an indication of their connectedness to campus life. Therefore, the extent to which they were engaged during the first year of college was valuable to this study. The following tables present frequency distributions for each item measuring the academic success. Also included are measures of central tendency and spread for appropriate items.

As Table 18 presents, 67.4% of respondents indicated that they did not feel connected to faculty at all or to a minimum degree while 31.9% felt moderately or to a large degree connected to faculty. Similar percentages were recorded for connectedness to academic advisors: 63.5% did not feel connected at all or minimally connected and 36.5% were moderately or to a large degree connected. The opposite was true for connected to friends with 9.5% indicated not at all or minimally and 90.5% of respondents were connected to a moderate to large degree to friends. Sixty-five percent of respondents were not at all or minimally connected to team sports and 35% were moderately or largely connected. Finally 33.4% of respondents were not at all or minimally connected to clubs and organizations and 66.4% were moderately or largely connected to clubs and organizations. Respondents indicated that they were less connected to faculty, academic advisors and team sports than they were to friends primarily followed by clubs and organizations.

Table 18

Frequency Distribution: What Degree Did You Feel Connected to Each of the Following during Your First Year of College?

	Not at all	To a minimum degree	To a moderate degree	To a Large Degree	Missing data	Totals
	n %	*n* %	*n* %	*n* %	*n* %	*n* %
Faculty in your department	48 34.8	45 32.6	36 26.1	8 5.8	1 .7	138 100
Academic advisors	37 27.0	50 36.5	37 27.0	13 9.5	1 .7	138 100
Your friends	1 0.7	12 8.8	33 24.1	91 66.4	1 .7	138 100
Team sports	63 46.0	26 19.0	29 21.2	19 13.9	1 .7	138 100
Clubs and organizations	14 10.2	32 23.4	51 37.2	40 29.2	1 .7	138 100

Table 19 reports responses regarding activities that the respondents did independently during the first of college. This engagement issue was also analyzed from the perspective of the peer mentoring influence on doing any of these activities on Table 14 in the peer mentoring section. A percentage of students indicated that they independently participated in activities during the first year of college as follows: 80.9% attended cultural arts types of events, 90.5% exercised or participated in physical fitness activities, 57.8% of the respondents participated in activities to enhance their spirituality, 73.7% examined the strengths and/or weaknesses of their own views on a topic or issue, 88.2% tried to better understand someone else's views by imagining how an issue looks from his or her perspective, 87.6% learned something that changed the way they understand an issue or concept, 56.2% of respondents joined a social organization and 72.3% participated in community service activities.

Table 19

Frequency Distribution: Did You Do This Activity during Your First Year of College?

	Yes	No	Missing data	Total
	n %	*n* %	*n* %	*n* %
Attend an art exhibit, play, dance, music, theatre, or other performance	110 80.9	26 19.1	2	138 100
Exercise or participate in physical fitness activities	124 90.5	13 9.5	1	138 100
Participate in activities to enhance your spirituality	78 57.8	57 42.2	3	138 100
Examine the strengths and/or weaknesses of your own views on a topic or issue	101 73.7	36 26.3	1	138 100
Try to better understand someone else's views by imagining how an issue looks from his or her perspective	120 88.2	16 11.8	2	138 100
Learn something that change the way you understand an issue or concept	120 87.6	17 12.4	1	138 100
Join a social organization (e.g., Greek sorority/fraternity, special interest clubs)	77 56.2	60 43.8	1	138 100
Participate in community service activities	99 72.3	38 27.7	1	138 100

In summary, respondents participated in numerous activities of a social or cultural nature without the prompting of a mentor during their first year of college. The activities with the highest response rate were attended cultural arts types of events, exercise or physical fitness activities, tried to better understand someone else's views by imagining how an issue looks from his or her perspective, and learned something that changed the way they understand an issue or concept. Each of these activities received positive responses exceeding 80%. Though the

responses were above 50%, enhancing spirituality and joining a social organization were rated lower than the others.

Students were asked about campus residency to ascertain where they lived during the first year of college since the literature shows that on-campus residency results in more connectedness to the university (see Table 20). Ninety-seven and one-tenth percent of the respondents lived on campus while 2.2% of them lived off campus. This variable was not analyzed further because the overwhelming majority of respondents were on-campus residents.

Table 20

Frequency Distribution: In Your First Year of College, Did You Live on Campus or off Campus?

Campus Residency	*n* %
On campus	134 97.1
Off campus	3 2.2
Some of each	1 0.7

Inferential Statistics for Relationships among Peer Mentoring, Academic Success, Social Engagement, and Demographic Variables

Inferential statistics were completed for categorical variables that have a few levels using crosstabulations with Fisher's Exact Test. This test was reported instead of chi-square because the sample size and/or relatively even split of the subjects did not always meet 80% of the cells greater than five. Peer mentoring variables were analyzed in relation to academic success, social engagement and demographic variables. In addition, one-way analysis of variance (ANOVA) tests were conducted to analyze relationships between peer mentoring variables and continuous academic success variables.

Peer mentoring and academic success. Each peer mentoring question was analyzed for the relationship with academic success. After reviewing the descriptive statistics and crosstabulations for each of the academic success variables, it became evident that attending class, studying alone, and GPA were the variables that reliably assessed academic success. Studying in small groups and attending non-required lectures and seminars were not showing reliable relationships. Initially, it was assumed that attending class, studying alone, studying in small groups and attending non-required lectures would measure academic success.

In Table 21, the relationships between the mentor/mentee agreement and two continuous academic success variables—importance of attending class and studying alone are shown. There are no statistically significant relationships here.

Table 21

Fisher's Exact Test p-Values for Mentor Agreement and Academic Success Variables

Mentor/Mentee agreement	Attend class	Study Alone
Meeting frequency	p=0.59	p=1.00
Method(s) of communication	p=1.00	p=0.16
First year changes	p=1.00	p=1.00
Addressing (mentee) needs	p=1.00	p=0.35
None of the above	p=1.00	p=0.74

Note: p-values less than 0.05 are considered statistically significant

Table 22 provides results of the Fisher's Exact Test of the relationships between mentees' overall impression of the peer mentoring program at the beginning and two continuous academic success variables—importance of attending class and studying alone. There were no statistically significant relationships found between the overall impression of the peer mentoring program and the importance of the academic success variables of attending class and studying alone.

Table 22

Fisher's Exact Test p-Values for Overall Impression of Peer Mentoring Program at the Beginning of First Year of College

	Attend class	Study Alone
Clear understanding of the program	p=0.96	p=0.69
Mentor's knowledge	p=0.15	p=0.34
Mentor's willingness to share knowledge	p=0.87	p=0.14
Mentor's availability	p=0.13	p=0.13
Trusting relationship	p=0.59	p=0.68
Expectations clearly communicated	p=0.89	p=0.53
Full advantage of program	p=0.26	p=0.47
Appropriate amount of communication	p=0.63	p=0.53
Appropriate type of communication	p=0.75	p=0.14
Focus on my needs	p=0.79	p=0.56
First semester communication	p=0.06	p=0.38
Second semester communication	p=0.36	p=0.60
Discuss ideas from readings	p =0.25	p =0.07
Conversations about religion	p =0.20	p =0.60
Conversations about political opinions	p =0.17	p =0.20
Conversations about personal values	p =0.16	p =0.76

Fisher's Exact Test was run to test the relationship between mentor's background characteristics and two academic success variables—importance of attending class and studying alone. Table 23 shows that there is a statistically significant relationships between the mentors background characteristic of race/ethnicity and the mentees' belief that studying alone is important (p = 0.03).

Table 23

Fisher's Exact Test p-Values for Importance of Background Mentor Characteristics to Mentee

Characteristic	Attend class	Study Alone
Age	p=0.94	p=0.50
Race/Ethnicity	p=0.69	***p*=0.03**
Major	p=0.32	p=0.66
Gender	p=0.94	p=0.43
Economic status	p=0.14	p=0.83
Geographical origin	p=0.28	p=0.64
Area of origin	p=0.18	p=0.63
Physical appearance	p=0.07	p=0.21

Further analysis revealed that students thought that the mentors' racial/ethnic background was slightly important to not at all important as it relates to the academic success strategy of studying alone, even though studying alone was moderately to very important for the majority of respondents (see Table 24).

Table 24

Crosstabulation: Importance of Mentor Racial/Ethnic Background and Mentee Studying Alone

			Study alone_AS_first year				Total
			Not at all Important	Slightly Important	Moderately Important	Very Important	
Race_Ethnicity	Not at all important	Count	2	8	22	30	62
		%	3.2	12.9	35.5	48.4	100.0
	Slightly Important	Count	1	4	13	14	32
		%	3.1	12.5	40.6	43.8	100.0
	Moderately Important	Count	1	1	18	9	29
		%	3.4	3.4	62.1	31.0	100.0
	Very Important	Count	0	4	1	10	15
		%	0.0	26.7	6.7	66.7	100.0
Total		Count	4	17	54	63	138
		%	2.9	12.3	39.1	45.7	100.0

The only statistically significant relationship for the importance of the race/ethnicity of the mentor's background characteristic was with studying alone as a strategy for academic success. Race/ethnicity was not at all important as studying alone was very important to 48.4% of students.

Table 25 displays the significance of the mentees expectations of the mentor in relation to the mentor's qualities that are perceived as most important. There was a statistically significant relationship between the importance of attending class as an academic activity and the mentor being intuitive (p = 0.04).

This relationship was further analyzed, showing higher rankings on intuitive expectations of mentor and rating attending class as very important (see Table 26). The importance of intuitive mentoring linked to higher academic success.

Table 25

Fisher's Exact Test p-Values for Expectations of a Mentor and Academic Success Variables

	Attend class	Study Alone
Approachable	p=0.70	p=0.24
Available	p=0.42	p=cannot be computed*
Dependable	p=0.75	p=cannot be computed*
Friendly	p=0.51	p=cannot be computed*
Intelligent	p=0.67	p=cannot be computed*
Intuitive	***p*=0.04**	p=0.41
Organized	p=0.45	p=0.21
Thoughtful	p=0.44	p=cannot be computed*
Trustworthy	p=0.27	p=cannot be computed*

*could not be computed because of small sample size.

Table 26

Crosstabulation: Relationship between the Importance of Attending Class and Mentor's Intuitive Characteristic

			Intuitive M_expectations							
			1.00	2.00	3.00	4.00	5.00	6.00	7.00	Total
Attend class	Not at all Important	Count	1	1	0	0	1	0	0	3
		%	2.70	2.33	0.00	0.00	16.67	0.00	0.00	2.31
	Slightly Important	Count	0	0	1	0	0	0	0	1
		%	0.00	0.00	3.70	0.00	0.00	0.00	0.00	0.77
	Moderately Important	Count	0	6	3	0	0	0	1	10
		%	0.00	13.95	11.11	0.00	0.00	0.00	100.00	7.69
	Very Important	Count	36	36	23	13	5	3	0	116
		%	97.30	83.72	85.19	100.00	83.33	100.00	0.00	89.23
Total		Count	37	43	27	13	6	3	1	130
		%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note. 1 = most important ranking to 7 = least important ranking

Table 27 shows that there were statistically significant relationships between mentor characteristics and academic success variables as follows: (a) the importance of attending class with expectations of the mentor being intelligent ($p = 0.01$), (b) the importance of studying alone and expectations of the mentor being dependable ($p = 0.04$), and (c) the importance of attending class and the mentor expected to be trustworthy ($p = 0.02$). These significant relationships were further analyzed. Table 28 shows that the relationship between the academic success variable of studying alone and the descriptive of the peer mentor being dependable during the first year of college to a large extent very important (54.8%).

Table 27

Fisher's Exact Test p-Values for Mentee Descriptions of Mentor and Academic Success Variables

	Attend class	Study Alone
Approachable	p=0.88	p=0.37
Available	p=0.31	p=0.33
Dependable	p=0.82	**p=0.04**
Friendly	p=0.06	p=0.91
Intelligent	**p=0.01**	p=0.80
Intuitive	p=0.24	p=0.83
Organized	p=0.13	p=0.35
Thoughtful	p=0.12	p=0.90
Trustworthy	**p=0.02**	p=0.53

Table 28

Crosstabulation: Academic Success Variable (Studying Alone) and Mentor Dependable Characteristic

			Q9_3_dependable_describe				Total
			1.00	2.00	3.00	4.00	
Study alone	Not at all Important	Count	0	0	1	3	4
		%	0.0	0.0	25.0	75.0	100.0
	Slightly Important	Count	1	3	2	11	17
		%	5.9	17.6	11.8	64.7	100.0
	Moderately Important	Count	4	10	23	17	54
		%	7.4	18.5	42.6	31.5	100.0
	Very Important	Count	8	10	10	34	62
		%	12.9	16.1	16.1	54.8	100.0
Total		Count	13	23	36	65	137
		%	9.5	16.8	26.3	47.4	100.0

Table 29 shows that the importance of attending class to achieve academic success as related to the peer mentor being described with the characteristic of trustworthy was to a large extent very important (50%). Table 30 shows the relationship between the importance of attending class as an academic activity and the descriptive of their peer mentor being intelligent during the first year of college as to a large extent very important (62.9%).

Table 29

Crosstabulation: Importance of Attending Class and Mentor Trustworthy Characteristic

			Q9_9_trustworthy_describe_Recoded				
			1.00	2.00	3.00	4.00	Total
Attend class _	Not at all Important	Count	0	0	0	3	3
		%	0.0	0.0	0.0	100.0	100.0
	Slightly Important	Count	0	0	1	0	1
		%	0.0	0.0	100.0	0.0	100.0
	Moderately Important	Count	0	2	7	1	10
		%	0.0	20.0	70.0	10.0	100.0
	Very Important	Count	13	20	28	61	122
		%	10.7	16.4	23.0	50.0	100.0
Total		Count	13	22	36	65	136
		%	9.6	16.2	26.5	47.8	100.0

Table 30

Crosstabulation: Academic Success Variable (Studying Alone) and Mentor Intelligent Characteristic

			intelligent_describe				
			1.00	2.00	3.00	4.00	Total
Study alone	Not at all Important	Count	0	0	0	4	4
		%	0.0	0.0	0.0	100.0	100.0
	Slightly Important	Count	1	1	6	9	17
		%	5.9	5.9	35.3	52.9	100.0
	Moderately Important	Count	3	4	20	27	54
		%	5.6	7.4	37.0	50.0	100.0
	Very Important	Count	4	3	16	39	62
		%	6.5	4.8	25.8	62.9	100.0
Total		Count	8	8	42	79	137
		%	5.8	5.8	30.7	57.7	100.0

Table 31 shows that there were no statistically significant relationships between the ways the peer mentoring relationship aided the mentees academic success and attending class or studying alone.

Table 31

Fisher's Exact Test p-Values for Academic Success and Ways Peer Mentoring Aided the Mentee

	Attend class	Study Alone
Selection of a major	p=0.45	p=0.23
Maximize GPA	p=0.49	p=0.24
Navigate the academic environment	p=0.94	p=0.08
Navigate the social environment	p=0.85	p=0.99
Use of university resources	p=0.89	p=0.37

As reported on Table 32, there were no statistically significant values for mentor encouraging mentees to participate in social engagement activities and their academic success.

Table 32

Fisher's Exact Test p-Values for Mentor Encouragement of Social Engagement and Academic Success Variables

	Attend class	Study Alone
Attend art exhibit	p=0.89	p=0.74
Exercise/physical fitness	p=0.34	p=0.65
To enhance spirituality	p=0.07	p=0.75
Examine strengths and/or weaknesses of own views	p=0.39	p=0.67
Understand other's views	p=0.18	p=0.34
Imagining someone else's views from his/her perspective	p=0.09	p=0.88
Joined a social organization	p=0.73	p=0.59
Community service	p=0.53	p=0.48

ANOVAs were conducted to determine statistical significance related to continuous variables measuring peer mentoring and academic success. Table 33 shows a statistically significant values for the continuous variables were as follows: The average number of hours of studying each weekend and overall impression that their peer mentor was very knowledgeable about things that would help mentee to succeed in college ($F = 4.29$ (4,133), $p = 0.00$), average number of hours of study each weekday and frequency of communication ($F = 3.16$ (5,132), $p = 0.01$), average number of hours of study each weekend and frequency of communication ($F = 2.43$ (5,129), $p = 0.04$).

Table 33

ANOVA Results for Overall Impressions of the Peer Mentoring Experience and Academic Success Variables

	Average number of hours - study each **weekday?**	Average number of hours - study each **weekend?**	**credit hour** completed at end of first year	**GPA** at the end of your first year
Clear understanding of the Peer Mentoring Program	*F*=0.91 (4,133) *p* =0.46	*F*=0.71 (4,130) *p*=0.59	*F*=0.61 (4,133) *p*=0.65	*F*=0.32 (4,133) *p*=0.86
My mentor was very knowledgeable	*F*=4.29 (4,133) ***p*=0.00**	*F*=1.02 (4,130) *p*=0.40	*F*=0.50 (4,133) *p*=0.74	*F*=1.59 (4,133) *p*=0.18
My mentor demonstrated the desire to share knowledge	*F*=2.16 (4,133) *p*=0.08	*F*=2.23 (4,130) *p*=0.07	*F*=0.06 (4,133) *p*=0.99	*F*=1.42(4,133) *p*=0.23
My mentor was available when I needed him/her.	*F*=1.39 (4,133) *p*=0.24	*F*=0.36 (4,130) *p*=0.84	*F*=0.20 (4,133) *p*= 0.94	*F*=2.18 (4,133) *p*=0.07
My mentor and I had a trusting relationship.	*F*=1.54 (4,133) *p*=0.19	*F*=0.31 (4,130) *p*=0.87	*F*=1.09 (4,133) *p*=0.36	*F*=1.20 (4,133) *p*=0.31
Expectations were clearly communicated	*F*=1.13 (4,133) *p*=0.35	*F*=0.87 (4,130) *p*=0.49	*F*=0.43 (4,133) *p*=0.79	*F*=1.96 (4,133) *p*=0.10
I took full advantage of the peer mentoring program.	*F*=0.70 (4,133) *p*=0.60	*F*=1.68 (4,130) *p*=0.16	*F*=0.21 (4,133) *p*=0.93	*F*=0.05 (4,133) *p*=1.00
The amount of communication with mentor- appropriate	*F*=1.35 (4,133) *p*=0.26	*F*=0.82 (4,130) *p*=0.51	*F*=0.28 (4,133) *p*=0.89	*F*=1.28 (4,133) *p*=0.28

Table 33

(Cont.)

	Average number of hours - study each **weekday?**	Average number of hours - study each **weekend?**	**credit hour** completed at end of first year	**GPA** at the end of your first year
The type of communication with my mentor was appropriate	F=2.18 (4,132) *p*=0.08	F=1.83 (4,129) *p*=0.13	F=0.61 (4,132) *p*=0.66	F=0.85 (4,132) *p*=0.50
The focus was on my needs during the program.	F=1.66 (4,133) *p*=0.16	F=0.18 (4,130) *p*=0.95	F=0.54 (4,133) *p*=0.71	F=0.44 (4,133) *p*=0.78
Frequency of communication by any means first semester?	F=0.55 (5,132) *p*=0.74	F=0.28 (5,129) *p*=0.92	F=1.54 (5,132) *p*=0.18	F=0.20 (5,132) *p*=0.96
Frequency of communication by any means second semester?	F=3.16 (5,132) ***p*=0.01**	F=2.43 (5,129) ***p*=0.04**	F=1.40 (5,132) *p*=0.23	F=1.07 (5,132) *p*=0.38

The first statistically significant finding for overall impressions of the peer mentoring experience was the relationship between mentor being knowledgeable about things that would help mentee to succeed in college and studying on weekdays. Knowledge categories with means of studying: Average number of hours studying on weekdays: Strongly disagree – 5.00 (only 5 people in this average); Somewhat disagree – 2.79; Neither disagree or agree – 2.52; Somewhat agree – 3.16; Strongly agree – 2.62. Interpretation: Significant differences in average hours studied on weekdays are based on only five people who strongly disagreed that their mentor was knowledgeable about things that would help mentee to succeed in college, therefore, the interpretation is not included.

The next two statistically significant findings were frequency of communication during the second semester with studying on the weekdays and weekends. The significant difference in average communication was based on only two people; therefore, that interpretation is not included. As shown on Table 34, there was one statistically significant relationship between the

number of times that mentees discussed ideas from their readings or classes with their peer mentor outside of class and the number of credit hours completed at the end of the first year (F = 3.78 (3,134), p = 0.012). The analysis of this relationship was evaluated and the only variable that had more than five times was with only three people. Therefore, this significance is not meaningful and will not be interpreted further.

Table 34

ANOVA Results for Communication

	Average number of hours - study each weekday?	Average number of hours - study each weekend?	credit hour completed at end of first year	What was your GPA at the end of your first year of college?
Discussed ideas from your readings or classes with your peer mentor outside of class.	*F*=1.10 (3,134) *p*=0.353	*F*=0.43 (3,131) *p*=0.730	*F*=3.78 (3,134) ***p*=0.012**	*F*=0.28 (3,134) *p*=0.870
serious conversations with your peer mentor about religious beliefs	*F*=2.16 (3,134) *p*=0.10	*F*=0.55 (3,134) *p*=0.65	*F*=0.77 (3,134) *p*=0.51	*F*=0.28 (3,134) *p*=0.84
serious conversations with your peer mentor about political opinions	*F*=0.55 (2,135) *p*=0.58	*F*=0.91 (2,132) *p*=0.41	*F*=1.63 (2,135) *p*=0.20	*F*=0.04 (2,135) *p*=0.96
serious conversations with your peer mentor about personal values	*F*=1.48 (3,134) *p*=0.22	*F*=0.91 (3,131) *p*=0.44	*F*=0.64 (3,134) *p*=0.59	*F*=0.17 (3,134) *p*=0.92

Table 35 shows two significant relationships: (a) the relationship between race/ethnicity and credit hours completed at the end of the first year (F = 6.36 (3,134), p = 0.00), and (b) physical appearance as a mentor characteristic and average number of hours of study each weekend (F = 4.72 (3,131), p = 0.00). A relationship of statistical significance is the relationship between the race/ethnicity of the mentor background characteristic and the number of credit hours earned at the end of the first year. The ANOVA shows the results were based on an adequate sample size for the number of respondents for each variable to draw conclusions and

that the average student felt that the mentors' racial/ethnic background was very important. Further analysis of this relationship in Table 36 shows that students who thought the mentors' racial/ethnic background (M = 19.20) was very important took fewer credit hours than students who did not think the racial/ethnic background was important at all (M = 26.31).

Table 35

ANOVA Results for Mentor Background Characteristics

	Average number of hours - study each weekday?	Average number of hours - study each weekend?	credit hour completed at end of first year	GPA at the end of your first year
Age	F=0.41(3,134) p=0.75	F=0.43 (3,131) p=0.73	F=1.00 (3,134) p=0.40	F=0.21 (3,134) p=0.89
Race/Ethnicity	F=1.78 (3,134) p=0.15	F=0.41 (3,131) p=0.75	F=6.36 (3,134) ***p*=0.00**	F=0.79 (3,134) p=0.50
Major	F=0.47 (3,134) p=0.70	F=1.33 (3,131) p=0.27	F=0.22 (3,134) p=0.88	F=0.49 (3,134) p=0.69
Gender	F=1.72 (3,134) p=0.17	F=2.45 (3,131) p=0.07	F=2.03 (3,134) p=0.11	F=0.87 (3,134) p=0.46
Economic status	F=1.95 (3,133) p=0.12	F=0.81 (3,130) p=0.49	F=2.15 (3,133) p=0.10	F=0.65 (3,133) p=0.58
Geographical origin (e.g., state or region)	F=1.66 (3,133) p=0.18	F=1.38 (3,130) p=0.25	F=1.59 (3,133) p=0.20	F=0.66 (3,133) p=0.58
Area of origin (e.g., urban, rural, suburban)	F=0.28 (3,134) p=0.84	F=2.23 (3,131) p=0.09	F=0.41 (3,134) p=0.74	F=0.50 (3,134) p=0.68
Physical appearance (e.g., looks like you)	F=1.45 (3,134) p=0.23	F=4.72 (3,131) ***p*=0.00**	F=2.24 (3,134) p=0.09	F=1.31 (3,134) p=0.27

Table 36

ANOVA: Racial/Ethnic Background of Mentor and Credit Hours

	n	*M*[*]	*SD*
Not at all important	62	26.31	5.59
Slightly Important	32	26.84	5.76
Moderately Important	29	25.38	5.34
Very Important	15	19.20	9.03
Total	138	25.46	6.38

[*]These are mean credit hours.

Physical appearance and average number of hours studying on each weekend was statistically significant ($F = 4.72$ (3,131), $p = 0.00$). Table 37 shows the mean and standard deviations for this relationship. The sample size for moderately to very important responses were too small to analyze, but a mean of 3.98 for not at all important shows why this relationship was statistically significant.

Table 37

ANOVA Descriptives for the Relationship between Physical Appearance and Hours of Studying Each Weekend

study_wkends	*n*	*M*	*SD*
Not at all important	106	3.98	1.68
Slightly Important	22	4.159	1.47
Moderately Important	5	1.30	1.30
Very Important	2	3.00	0.71
Total	135	3.89	1.69

ANOVA results on the relationship between mentees' expectations of mentors and several academic success variables. There are significant relationships between average number of hours studying on weekdays and available ($F = 2.75$ (8,121), $p = 0.01$), weekends and available ($F = 2.05$ (8,118), $p = 0.05$), GPA and available ($F = 2.45$ (8,121), $p = 0.02$). The significant differences were based on very small numbers; therefore, further interpretations are not included. The same is true for dependable, friendly and intelligent.

Demographics and peer mentoring. Table 38 shows that there was a statistically significant relationship between several demographic variables and the peer mentoring agreement. The relationship between agreement regarding changes that might occur during the first year of college and the region of the country that the mentee regards as a permanent address

was significant ($p = 0.02$). The father's education and agreement to address the mentees' needs was significant at $p = 0.00$. First generation status and agreement regarding changes during the first year was significant at $p = 0.02$.

Table 38

Fisher's Exact Test p-Values for Demographic variables and Peer Mentoring Agreement

	Frequency of meetings	Communication method	Changes during first year	Addressing mentee needs	None of the above
Gender	p=0.24	p=0.62	p=0.78	p=1.00	p=0.76
Race/Ethnicity African Americans Caucasian Hispanic Other	 p=0.58 p=1.00 p=0.51 p=0.53	 p=0.55 p=0.22 p=1.00 p=0.53	 p=0.66 p=0.66 p=0.46 p=1.00	 p=0.86 p=0.61 p=0.26 p=0.60	 p=0.81 p=0.053 p=0.38 p=0.25
Region of country	p=0.86	p=0.95	***p*=0.02**	p=0.55	p=0.82
Size of graduation HS class	p=0.32	p=0.82	p=0.51	p=0.35	p=0.83
Prior Enrichment programs Upward Bound Project SEU	 p=1.00 p=0.52	 p=1.00 p=1.00	 p=1.00 p=0.33	 p=0.68 p=1.00	 p=0.38 p=1.00
First Generation	p=0.82	p=0.47	***p*=0.02**	p=0.54	p=0.35
Father's education	p=0.29	p=0.17	p=0.24	***p*=0.00**	***p*=0.02**
Mother's education	p=0.13	p=0.46	p=0.81	p=0.73	p=0.17

Table 39 shows that a mentee's permanent address or region of the county that they identify with most (the majority of the respondents were from the south), was significant with the perception that the mentor agreed to address the changes that might occur during the first year of college for 21.4% of the students; wherein, 78.6% of the students identifying with the south did not feel that the mentor agreed to address changes that might occur during the first year of college. The sample was very small for the other regions but those students identifying with the north and east also indicated that the changes that might occur were not be agreed upon to be addressed.

Table 39

Crosstabulation: Changes that Might Occur in First Year of PM Relationship and Mentees' Permanent Residence

			Changes in the first year_R		
			No	Yes	Total
Permanent residence region of the country do you identify	North	Count	10	0	10
		%	100.0	0.0	100.0
	South	Count	81	22	103
		%	78.6	21.4	100.0
	East	Count	18	0	18
		%	100.0	0.0	100.0
	West	Count	1	0	1
		%	100.0	0.0	100.0
	Other, specify	Count	3	3	6
		%	50.0	50.0	100.0
Total		Count	113	25	138
		%	81.9	18.1	100.0

Mentees who were first generation students (34.5%) said that they and their mentors agreed at outset to address changes that might occur during the first year of college; while 65.5% of first generation students said that they did not agree to address changes that might occur during the first year. This can be compared to the mentees who did not identify themselves as first generation college students wherein 86.2% expressed that they and their mentors did not agree at the outset to address changes that might occur during the first year (see Table 40).

Table 41 further analyzes the statistically significant relationship between father's highest educational level ($p = 0.00$) and agreement at the outset between mentor and mentee that the mentees needs would be addressed. This relationship shows that mentees whose father's had some college education (86.7%) responded that they did agree with the mentor to address their

needs at the outset while those whose father's highest level of educational achievement was a high school diploma or GED (72.2%) responded that they did not agree with the mentor to address their needs during the experience.

Table 40

Crosstabulation: Changes That Might Occur in First Year of PM Relationship and First Generation Students

			Changes in the first year		
			No	Yes	Total
First generation college student	Yes	Count	19	10	29
		%	65.5	34.5	100.0
	No	Count	94	15	109
		%	86.2	13.8	100.0
Total		Count	113	25	138
		%	81.9	18.1	100.0

Table 41

Crosstabulation: Needs of Mentee Being Addressed and Father's Highest Educational Level

			Needs of mentee addressed		
			No	Yes	Total
Father's highest educational level	Less than high school	Count	4	0	4
		%	100.0	0.0	100.0
	High school diploma or GED	Count	13	5	18
		%	72.2	27.8	100.0
Father's highest educational level (cont.)	Some college	Count	2	13	15
		%	13.3	86.7	100.0
	College graduate	Count	26	18	44
		%	59.1	40.9	100.0
	Post-secondary coursework or degree	Count	14	13	27
		%	51.9	48.1	100.0
Total		Count	59	49	108
		%	54.6	45.4	100.0

Table 42 shows that there is a statistically significant relationship between (a) Caucasian students and impressions that the mentor is expected to be knowledgeable (p = 0.03), (b) prior participation in Project SEU enrichment program and clear understanding of the peer mentoring program and mentor knowledgeable (p = 0.00) for both.

Table 42

Crosstabulations: Demographic Variables and Overall Peer Mentoring Experience

	Clear understanding of PM program	Mentor knowledgeable	Mentor desire to share	Mentor available	Trusting relationship	Expectations clearly communicated
Gender	p=0.60	p=0.50	p=0.50	p=0.52	p=0.17	p=0.68
Race/Ethnicity Af Am Caucasian Hispanic Other	 p=0.39 p=0.68 p=0.37 p=0.50	 p=0.27 **p=0.03** p=0.06 p=0.25	 p=0.52 p=0.19 p=0.17 p=0.80	 p=0.76 p=0.07 p=0.09 p=0.66	 p=0.67 p=0.06 p=0.39 p=0.41	 p=0.28 p=0.34 p=0.41 p=0.33
Region of country	p=0.41	p=0.10	p=0.50	p=0.33	p=0.93	p=0.09
Size of graduation HS class	p=0.87	p=0.38	p=0.34	p=0.90	p=0.48	p=0.70
Prior Enrichment programs Project SEU AHEC	 **p=0.00** p=1.00	 **p=0.00** p=0.75	 p=0.52 p=0.30	 p=0.59 p=0.63	 p=0.19 p=0.18	 **p=0.00** p=0.43
First Generation	p=0.78	p=0.36	p=0.72	p=0.08	p=0.07	p=0.37
Father's Education	p=0, cannot compute	p=0. 30	p=0.09	p=0.84	p=0.64	p=0, cannot compute
Mother's Education	p=0.15	p=0.64	p=0.31	p=0.21	p=0, cannot compute	p=0, cannot compute

Table 43 looks at the statistically significant relationship between mentor being very knowledgeable about things that would help students succeed in college and being of Caucasian descent ($p = 0.03$). The Caucasian students somewhat or strongly agreed that the mentor was knowledgeable about things that would help them to succeed in college. When compared to the students who were not Caucasian, the findings were essentially the same. They also agreed that their mentor was very knowledgeable about things that would help them to succeed in college.

Table 43

Crosstabulation: Caucasian Students and Knowledgeable Mentor

			Knowledgeable mentor					
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Total
Caucasian Students	Not Caucasian (Non-Hispanic)	Count	3	8	7	28	37	83
		%	3.6	9.6	8.4	33.7	44.6	100.0
	Caucasian (Non-Hispanic)	Count	2	6	14	20	13	55
		%	3.6	10.9	25.5	36.4	23.6	100.0
Total		Count	5	14	21	48	50	138
		%	3.6	10.1	15.2	34.8	36.2	100.0

Table 43 shows that Caucasian students somewhat agreed (36%) to strongly agreed (24%) that their mentor was knowledgeable about things that would help them to be successful in college. When comparing these percentages to non-Caucasian students, 34% somewhat agreed and 45% strongly agreed that their mentor was knowledgeable about things that would help them to be successful in college.

Table 44 examines the statistically significant relationship between the importance of clear understanding of the peer mentoring program and pre-college participation in Project SEU ($p = 0.00$). Though the sample was small ($n = 28$), 75% of all students who participated in Project SEU strongly agreed that they had a clear understanding of the peer mentoring program at outset.

Table 44

Crosstabulation: Clear Understanding of PM Program and Participation in Project SEU

			Clear understanding_PM exp_beginning_ R					Total
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
Project SEU_	No	Count	6	20	12	52	20	110
		%	5.5	18.2	10.9	47.3	18.2	100.0
	Yes	Count	5	0	2	10	11	28
		%	17.9	0.0	7.1	35.7	39.3	100.0
Total		Count	11	20	14	62	31	138
		%	8.0	14.5	10.1	44.9	22.5	100.0

Table 45 analyzes the statistically significant relationship between the importance of pre-college participation in Project SEU ($p = 0.00$) and a mentor who is knowledgeable about things that would help them succeed in college. Seventy-eight and six-tenths percent of the students expressed strong to somewhat agreement that their mentor was knowledgeable who participated in this pre-college enrichment program. The majority of the students (69.1%) did not participate in Project SEU who felt that the mentor was knowledgeable. Table 46 indicates that the majority of the students who participated in Project SEU (67.85%) expressed that they somewhat or strongly agreed that the expectations were clearly communicated.

Table 45

Crosstabulation: Participation in Project SEU and Knowledgeable Mentor

			Knowledgeable mentor					Total
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
Project SEU_	No	Count	1	12	21	40	36	110
		%	.9	10.9	19.1	36.4	32.7	100.0
	Yes	Count	4	2	0	8	14	28
		%	14.3	7.1	0.0	28.6	50.0	100.0
Total		Count	5	14	21	48	50	138
		%	3.6	10.1	15.2	34.8	36.2	100.0

Table 46

Crosstabulation: Participation in Project SEU and Clear Communication of Expectations

			Expectations clearly communicated_Reversed					Total
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
Project SEU_	No	Count	5	24	27	31	23	110
		%	4.5	21.8	24.5	28.2	20.9	100.0
	Yes	Count	5	0	4	10	9	28
		%	17.9	0.0	14.3	35.7	32.1	100.0
Total		Count	10	24	31	41	32	138
		%	7.2	17.4	22.5	29.7	23.2	100.0

Table 47 illustrates the statistically significant relationships between (a) African American students and amount of communication during the second semester ($p = 0.03$), (b) Caucasian students and the amount of communication being appropriate with the mentor during the first ($p = 0.04$), (c) Caucasian students and amount of communication during the first and

second semesters (p = 0.04), and (d) size of high school graduating class and amount of communication being appropriate (p = 0.03). Other variables were not statistically significant.

Table 48 further analyzes the statistically significant relationship between African American students and the average amount of communication during second semester (p = 0.03). The relationship of African American students to communication frequency during the second semester is that 32% communicated about once a month, 19% communicated less than once a month and 26% did not communicate at all during the second semester of the first year.

Table 47

Fisher's Exact Test p-Values for Demographics Variables and Peer Mentoring Communication

	Amount of communication appropriate	Type of communication appropriate	Communication first semester	Communication second semester
Gender	p=0.32	p=0.88	p=0.20	p=0.32
Race/Ethnicity African American Caucasian Hispanic Other	 p=0.90 **p=0.04** p=0.51 p=0.17	 p=0.80 p=0.11 p=0.13 p=0.69	 *p=0.06* **p=0.04** p=0.41 p=0.95	 p=**0.03** **p=0.04** p=0.32 **p=0.02**
Region of country	p=0.18	p=0.35	p=0.18	p=0.51
Size of HS graduation class	**p=0.03**	p=0.30	p=0*	p=0*
Prior Enrichment programs Talent Search Project SEU	 p=0.45 p=0.28	 p=0.27 p=0.54	 p=0.19 p=0.42	 p=0.77 p=0.67
First Generation	p=0.47	p=0.90	p=0.40	p=0.91
Father's Education	p=*	p=0.58	p=*	p=0*
Mother's Education	p=0.44	p=0.84	p=*	p=0*

*cannot compute because of lack of memory

Table 48

Crosstabulation: African American Students and Frequency of Communication during Second Semester

			Communication frequency second sem_R						
			Not at all	Less than once a month	About once a month	A few times a month	About weekly	More than once a week	Total
African American	Not African American	Count	17	17	24	9	7	2	76
		%	22.4	22.4	31.6	11.8	9.2	2.6	100.0
	African American	Count	16	12	11	20	3	0	62
		%	25.8	19.4	17.7	32.3	4.8	0.0	100.0
Total		Count	33	29	35	29	10	2	138
		%	23.9	21.0	25.4	21.0	7.2	1.4	100.0

In comparison to the other racial/ethnic groups, the communication frequency was very similar during the second semester of the first year with the exception of slightly more students of the non-African American group who communicated less than once a month (22%) and significantly more students in the African American group who communicated a few times a month (32.3%) as compared to (11.8%).

Table 49 shows that the Caucasian students seemed evenly split, regarding the appropriate amount of communication, between those who agree and those who disagree with slightly more in the somewhat agree and strongly agree (47%) responses. On the other hand, non-Caucasian students somewhat to strongly agreed (70%) with the amount of communication being appropriate.

Table 50 reports Caucasian students' responses regarding communication frequency during the first semester: 33% communicated about once a month, followed by 26% who

communicated a few times a month, 22% communicated less than once a month and 11% who did not communicate at all. The non-Caucasian students indicated the 43% communicated a few times a month, followed by 17% who communicated less than once a month and 16% about once a month and 8% who did not communicate at all.

Table 49

Crosstabulation: Caucasian Students and Amount of Communication

			Amount of communication was appropriate_Reversed					Total
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
Caucasian	Not Caucasian (Non-Hispanic)	Count	5	12	8	25	33	83
		%	6.0	14.5	9.6	30.1	39.8	100.0
	Caucasian (Non-Hispanic)	Count	10	10	9	15	11	55
		%	18.2	18.2	16.4	27.3	20.0	100.0
Total		Count	15	22	17	40	44	138
		%	10.9	15.9	12.3	29.0	31.9	100.0

Table 50

Crosstabulation: Caucasian Students and Frequency of Communication during First Semester

			Communication frequency first sem_						Total
			Not at all	Less than once a month	About once a month	A few times a month	About weekly	More than once a week	
Caucasian	Not Caucasian (Non-Hispanic)	Count	7	14	13	36	12	1	83
		%	8.4	16.9	15.7	43.4	14.5	1.2	100.0
	Caucasian (Non-Hispanic)	Count	6	12	18	14	3	2	55
		%	10.9	21.8	32.7	25.5	5.5	3.6	100.0
Total		Count	13	26	31	50	15	3	138
		%	9.4	18.8	22.5	36.2	10.9	2.2	100.0

Table 51 shows that Caucasian students communicated less frequently during the second semester. The highest percentages of communication were equally split between communicating about once a month and "not at all" at 30.9% followed by less than once a month at 20% during the second semester for non-Caucasian students. The comparison to non-Caucasian students showed communication at 28.9% for a few times a month followed by 21.7% for about once a month and less than once a month and 19.3% for "not at all."

Table 51

Crosstabulation: Caucasian Students and Communication Frequency during Second Semester

			Communication frequency second sem_						
			Not at all	Less than once a month	About once a month	A few times a month	About weekly	More than once a week	Total
Caucasian	Not Caucasian (Non-Hispanic)	Count	16	18	18	24	5	2	83
		%	19.3	21.7	21.7	28.9	6.0	2.4	100.0
	Caucasian (Non-Hispanic)	Count	17	11	17	5	5	0	55
		%	30.9	20.0	30.9	9.1	9.1	0.0	100.0
Total		Count	33	29	35	29	10	2	138
		%	23.9	21.0	25.4	21.0	7.2	1.4	100.0

Table 52 analyzes the statistically significant relationship between high school graduation class size and the amount of communication with mentor being appropriate ($p = 0.03$). The majority of students expressed agreement with the statement that the amount of communication with mentor was appropriate for all high school graduating class sizes with the highest percentages for high school graduating class sizes of 101–200 with 66% combined percentages for somewhat agree and strongly agree and students from high school graduating class size of 201–500 students with 59% indicating somewhat agree or strong agreement.

Table 52

Crosstabulation: Size of High School Graduating Class Size and Appropriate Communication with Mentor

			Amount of communication was appropriate					Total
			Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	
High School Graduating class size	Under 100 students	Count	1	3	3	4	7	18
		%	5.6	16.7	16.7	22.2	38.9	100.0
	101–200 students	Count	1	4	6	7	14	32
		%	3.1	12.5	18.8	21.9	43.8	100.0
	201–500 students	Count	11	15	3	22	20	71
		%	15.5	21.1	4.2	31.0	28.2	100.0
	501–1000 students	Count	2	0	5	7	3	17
		%	11.8	0.0	29.4	41.2	17.6	100.0
Total		Count	15	22	17	40	44	138
		%	10.9	15.9	12.3	29.0	31.9	100.0

The ANOVA results in Table 53 indicate that the relationship between the mentoring agreement at outset and the average number of hours that students studied each weekend and frequency of meeting which was statistically significant ($F = 7.14$ (1,133), $p = 0.01$). Further analysis in comparing the mean number of hours studied on weekends for frequency of meetings showed that those who had an agreement on frequency of meeting with their peer mentors studied an average of 3.29 hours over weekends, whereas those who had no such agreement studied 4.14 hours on average.

Table 53

ANOVA Results for Mentoring Agreement and Academic Success Variables

	Average number of hours - study each **weekday?**	Average number of hours - study each **weekend?**	**credit hour** completed at end of first year	What was your **GPA** at the end of your first year of college?
Frequency of meetings each week	*F*=0.96 (1,136) *p*=0.33	*F*=7.14 (1,133) ***p*=0.01**	*F*=0.00 (1,136) *p*=0.99	*F*=0.40 (1,136) *p*=0.53
Method(s) of communicating	*F*=0.47 (1,136) *p*=0.50	*F*=0.50 (1,133) *p*=0.48	*F*=0.10 (1,136) *p*=0.76	*F*=0.04 (1,136) *p*=0.84
Changes that might occur during the first year	*F*=0.01 (1,136) *p*=0.92	*F*=0.79 (1,133) *p*=0.37	*F*=0.77 (1,136) *p*=0.38	*F*=0.69 (1,136) *p*=0.41
Addressing your (mentee) needs to ensure success in college	*F*=0.02 (1,136) *p*=0.88	*F*=0.08 (1,133) *p*=0.78	*F*=0.75 (1,136) *p*=0.39	*F*=0.40 (1,136) *p*=0.53
None of the above	*F*=0.74 (1, 136) *p*=0.39	*F*=0.06 (1, 133) *p*=0.81	*F*=0.38 (1, 136) *p*=0.54	*F*=0.46 (1, 136) *p*=0.50

Demographic data and social engagement variables. The following demographic variables and social engagement variables were assessed using SPSS crosstabulations. As is shown in Table 54, the following relationships were statistically significant at the : gender and faculty (p = 0.03); Caucasian students and academic advisors (p = 0.05); Caucasian students and clubs/organizations (p = 0.02), Hispanic students and clubs/organizations (p = 0.00); Other students and faculty (p = 0.01); region of country and friends (p = 0.03); size of high school graduation class and team sports (p = 0.01); first generation and clubs/organizations (p = 0.02). All the other variables were not statistically significant.

Further analysis of the relationship between gender and faculty connectedness during the first year is shown in Table 55. Females felt minimally connected or not at all connected to faculty to a large extent and though the sample size was much smaller for males, they felt connected to faculty to a moderate degree.

Table 54

Fisher's Exact Test p-Values for Demographics Variables and Connectedness Social Engagement Variable

	Faculty	Academic Advisor	Friends	Team Sports	Clubs/orgs.
Gender	***p*=0.03**	*p*=0.27	*p*=0.55	*p*=0.15	*p*=0.66
African American Caucasian Hispanic Other	*p*=0.70 *p*=0.08 *p*=0.17 ***p*=0.01**	*p*=0.87 ***p*=0.05** *p*=0.28 *p*=0.11	*p*=0.32 *p*=0.32 *p*=0.73 *p*=0.85	*p*=0.14 *p*=0.72 *p*=0.67 *p*=0.92	*p*=0.52 ***p*=0.02** ***p*=0.00** *p*=0.32
Region of country	*p*=0.48	*p*=0.17	***p*=0.03**	*p*=0.13	*p*=0.92
Size of HS graduation class	*p*=0.07	*p*=0.80	*p*=0.40	***p*=0.01**	*p*=0.49
Talent Search Project SEU	*p*=0.70 *p*=0.75	*p*=0.67 *p*=0.25	*p*=0.44 *p*=0.65	*p*=0.92 *p*=0.39	*p*=1.00 *p*=0.11
First Generation	*p*=0.59	*p*=0.87	*p*=0.26	*p*=0.26	***p*=0.02**
Father's Education	*p*=0.12	*p*=0.29	*p*=0.95	*p*=0.34	*p*=0.60
Mother's Education	*p*=0.47	*p*=0.15	*p*=0.70	*p*=0.74	*p*=0.16

Table 55

Crosstabulation: Gender and Faculty Connection during First Year

			Faculty_Connected_1st_Yr_R				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
Gender	Female	Count	41	39	23	8	111
		%	85.4	86.7	63.9	100.0	81.0
	Male	Count	7	6	13	0	26
		%	14.6	13.3	36.1	0.0	19.0
Total		Count	48	45	36	8	137
		%	100.0	100.0	100.0	100.0	100.0

Table 56 shows that Caucasian students felt connected to academic advisors to a minimum degree (43%) or not at all (32%) during the first year of college as compared to non-Caucasian students (24%) who also did not feel connected to academic advisors and 33% of non-Caucasian students who felt connected to academic mentors to a minimum degree.

Table 56

Crosstabulations: Connectedness of Caucasian Students to Academic Advisors

			academic advisor_Connected				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
Caucasian (Non-Hispanic)	Not Caucasian (Non-Hispanic)	Count	20	27	24	12	83
		%	24.1	32.5	28.9	14.5	100.0
	Caucasian (Non-Hispanic)	Count	17	23	13	1	54
		%	31.5	42.6	24.1	1.9	100.0
Total		Count	37	50	37	13	137
		%	27.0	36.5	27.0	9.5	100.0

Table 57 shows that Caucasian students expressed connectedness to clubs and organizations to a large degree (37%) and moderate degree (33.3%) whereas the non-Caucasian students showed similar percentages with the highest being to a moderate degree (39.8%) of connectedness to club and organizations.

Table 58 shows that Hispanic students expressed connectedness to clubs and organizations to a large degree (58 %) as compared to 26% non-Hispanic students who felt connectedness with clubs and organizations.

Table 57

Crosstabulations: Connectedness of Caucasian Students to Clubs and Organizations

			Clubsorgs_Connected_R				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
Caucasian (non-Hispanic)	Not Caucasian (Non-Hispanic)	Count	5	25	33	20	83
		%	6.0	30.1	39.8	24.1	100.0
	Caucasian (Non-Hispanic)	Count	9	7	18	20	54
		%	16.7	13.0	33.3	37.0	100.0
Total		Count	14	32	51	40	137
		%	10.2	23.4	37.2	29.2	100.0

Table 58

Crosstabulations: Hispanic Students Connectedness to Clubs and Organizations

			Clubsorgs_Connected				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
Hispanic	Non-Hispanic	Count	11	31	50	33	125
		%	8.8	24.8	40.0	26.4	100.0
	Hispanic	Count	3	1	1	7	12
		%	25.0	8.3	8.3	58.3	100.0
Total		Count	14	32	51	40	137
		%	10.2	23.4	37.2	29.2	100.0

Table 59 analyzes the statistically significant relationship between "Other" racial/ethnic identification and connectedness to faculty. Students were able to select "Other" as a racial/ethnicity identity when they did not identify solely with one of the other categories. Some racial/ethnic groups were included in this group because students were able to select more than

one category and not all students belonging to groups with small numbers were captured. Table 60 shows that (N = 16) for the 'Other' category and responses were evenly split for connectedness to faculty between not at all connected (31.3%) and to a moderate degree (31.3%).

Table 59

Crosstabulations: Other Racial/Ethnic Group and Faculty Connectedness

			Faculty_Connected_1st_Yr_R				Total
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	
Other	Not Other Race	Count	43	43	31	4	121
		%	35.5	35.5	25.6	3.3	100.0
	Other Race	Count	5	2	5	4	16
		%	31.3	12.5	31.3	25.0	100.0
Total		Count	48	45	36	8	137
		%	35.0	32.8	26.3	5.8	100.0

Table 60 shows that the majority of students identified with the south as the region of the country considered their permanent residence. The highest degree of connectedness between regions and friends was 'to a large degree' between students who identified with the south (68.6%) and friends. The sample was very small for other regions of the country but all were in the moderate to large degree of connectedness.

Table 61 shows that the relationship between the size of the high school graduation class and the connection to college team sports showed that more students from high schools in the 201–500 range responded across the spectrum with most "not at all connected (47%). This is also true for students who graduated from smaller high schools.

Table 60

Crosstabulation: Region of the Country and Connectedness to Friends

			Friends_Connected_R				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
Permanent residence region of the country do you identify	North	Count	0	2	0	8	10
		%	0.0	20.0	0.0	80.0	100.0
	South	Count	1	5	26	70	102
		%	1.0	4.9	25.5	68.6	100.0
	East	Count	0	3	7	8	18
		%	0.0	16.7	38.9	44.4	100.0
	West	Count	0	0	0	1	1
		%	0.0	0.0	0.0	100.0	100.0
	Other, specify	Count	0	2	0	4	6
		%	0.0	33.3	0.0	66.7	100.0
Total		Count	1	12	33	91	137
		%	.7	8.8	24.1	66.4	100.0

Table 61

Crosstabulations: High School Graduating Class Size and Connectedness to Team Sports

			Team sports_Connected_				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
High School Graduating class size	Under 100 students	Count	7	4	2	5	18
		%	38.9	22.2	11.1	27.8	100.0
	101–200 students	Count	20	5	5	1	31
		%	64.5	16.1	16.1	3.2	100.0
	201–500 students	Count	33	9	19	10	71
		%	46.5	12.7	26.8	14.1	100.0
	501–1000 students	Count	3	8	3	3	17
		%	17.6	47.1	17.6	17.6	100.0
Total		Count	63	26	29	19	137
		%	46.0	19.0	21.2	13.9	100.0

Table 62 shows that (59%) of first generation college students expressed a moderate degree of connectedness to clubs and organizations. Whereas compared to the students who were not first generation, the percentages in the moderate (32%) to large degree (34%) were more equally distributed in their degree of connectedness.

Table 62

Crosstabulations: First Generation College Students to Connectedness to Clubs and Organizations

			Clubsorgs_Connected				
			Not at all	To a minimum degree	To a moderate degree	To a large Degree	Total
First generation college student	Yes	Count	3	6	17	3	29
		%	10.3	20.7	58.6	10.3	100.0
	No	Count	11	26	34	37	108
		%	10.2	24.1	31.5	34.3	100.0
Total		Count	14	32	51	40	137
		%	10.2	23.4	37.2	29.2	100.0

CHAPTER 5

Discussion

This study was designed to address a gap in the literature regarding the relationship between peer mentoring, and academic success and social engagement of historically underserved first-year students at SE University. A sample of students who participated in a peer mentoring program at the onset of their first year of college participated in the study. These students were selected to participate in the peer mentoring program because they met the university requirements of being from underserved groups as outlined in Chapter 3. A questionnaire was created to ascertain their perspectives on the quality of the peer mentoring program as related to academic success, and social engagement. Controlling variables added to the design included student's gender; race/ethnicity; residential background (e.g., region of the country); academic background (e.g., size of high school graduating class); enrichment programs prior to college; first generation college attendee; and parental level of education. Inferential statistics were used to determine what, if any, statistically significant relationships exists among these variables and the control demographic variables.

To focus the lens that we use to view the results, I am reminded of the definition used to describe the underserved population sample of this research investigation: underserved students are those students who are first generation, racial and ethnic minorities and/or of low income (Kuh et al., 2006). SEU defined the first generation student as a student with one parent who does not have a four year college degree. It is important to evaluate the perspectives of the respondents regarding these relationships in light of their background.

The body of literature on mentoring suggests that mentoring can be executed in a variety of ways but all agree that the impact on the mentor and/or mentee has value. Considering the definition of peer mentoring as a helping relationship in which two individuals of similar age and/or experience come together, either informally or through formal mentoring schemes to maximize career-related and psychosocial assistance (Terrion & Leonard, 2007). Respondents to my questionnaire seemed to agree that the peer mentoring experience has value as evidenced by their responses to a multi-part question regarding the overall impressions of the experience. Sixty-seven percent of respondents indicated that they had a clear understanding of the program at the beginning.

The purpose of the chapter is to discuss the results of the study. I start by addressing the research questions posed in the study including a comparison of the findings of the study to prior research followed by implications for future practice, research and policy. The chapter concludes with limitations followed by concluding remarks.

Alignment of Results with Research Questions

The following questions guided my dissertation study:

1. How do the students describe the quality of the peer mentoring experience, as measured by the PMASSE?
2. How do students describe their first year academic success as measured by the PMASSE?
3. How do students describe their first year social engagement, as measured by the PMASSE?
4. How do academic success and social engagement differ by quality of the peer mentoring experience?

5. What is the relationship between peer mentoring, academic success, social engagement, and the demographics variables?

Research Question 1: Peer mentoring experience. This research question was addressed in the first ten questions of the questionnaire. Students were asked to evaluate the quality of the peer mentoring experience by evaluating the agreement with the mentor at outset, assessing the overall impression of the experience, frequency of meetings, communication, and expansion of knowledge and help provided by the experience. Additionally, they were asked to evaluate the expectations of the peer mentor and describe those characteristics in light of the mentor that was paired with them.

A careful analysis of the data revealed several descriptive qualities as perceived by the respondents of the peer mentoring experience. According to the 138 respondents, there was agreement that they had a clear understanding of the program, that the mentors were very knowledgeable about things that would help them to be successful in college and were available and used the appropriate amount and type of communication and the focus was on them during the program. On the other hand, respondents were more evenly distributed on both extremes of agreement or disagreement in their response to taking full advantage of the program and they responded more neutrally regarding having a trusting relationship with the mentor. The highest mean scores were the type of communication with the mentor was appropriate followed by the mentor demonstrating the desire to share his/her knowledge with them. The mentees and mentors had more communication during the first semester than the second averaging a few times per week during the first semester and between once per month to not at all during the second semester. When students were questioned about the type of conversations with their mentors, they seemed more open to discussing ideas from readings or classes and having serious

conversations about personal values than about religious beliefs or political opinions. A study done by Hayes and Koro-Ljungberg (2011) may be applicable to the reason behind this finding in my study. They investigated the dialogic exchanges and co-construction of knowledge among female graduate students. They endeavored to engage female graduate students in a dialogic exchange about their positive and negative experiences. They concluded that mentorship is about "goodness of fit" and the participants agreed on the importance of expectations being clearly expressed by the mentor and mentee. Students in my study may not have realized that discussion of ideas was of great value to developing a deeper relationship with a mentor. Therefore, this lack of openness to these deeper discussions of ideas may not have been a part of the agreement between the mentor and mentee at outset. This is especially important to note since a large percentage of the respondents indicated that they never had any of these conversations with a peer mentor.

A number of questions were asked about communication. It was statistically significant that the type and amount of communication was judged by the respondents as appropriate even though it was sparser during the second semester. A study by Smith-Jentsch et al. (2008) looked at the impact of peer-mentoring by comparing face-to-face to electronic chat. It was revealed that despite the increasing use of e-mentoring programs, empirical research on the effectiveness of such programs is sparse. They discovered benefits and limitations to the e-mentoring concept and encouraged additional empirical research in this area as more and more universities and other agencies rely on electronic means of communication. It was be beneficial to explore what these students believe to be appropriate communication as compared to the Smith-Jentsch et al. (2008) study.

The importance perceived by students of the mentor's major was most important, followed by age then race/ethnicity when asked about the importance of background characteristics of a mentor. The major of the peer mentor was of utmost importance while race/ethnicity, economic status, area of origin (e.g., urban, rural, suburban), physical appearance, and were not at all important. When asked about the most important descriptors that they expected of a peer mentor, approachable, available, and friendly were ranked highest. On the other hand, perceived characteristics of their mentors were ranked highest for organized, available, intuitive.

An additional set of questions were asked regarding whether or not the peer mentoring aided them in any ways during college and the respondents expressed that the peer mentoring program aided them most in navigating the university academic environment and taking advantage of university resources followed by navigating the university social environment during the first year of college. A number of activities were listed for respondents to indicate whether their mentor encouraged them to do during the first year of college. About half of the students indicated that the peer mentor encouraged them to attend an art exhibit, play, dance, music, theatre, or other performance, learn something that changed the way they understood an issue or concept, joined a social organization, and/or participate in community service activities. However, they also indicated that they would do these activities independently.

Finally, when asked about the length of time that they participated in the peer mentoring experience, the majority of them participated more than six months with a third of them exceeding twelve months. When questioned about still participating during the second year of college, 34% are serving as mentors while 59% are no longer participating. This finding begs the question of whether or not this is an expectation of participating in the peer mentoring

experience, and if so, are these expectations clearly communicated with the students during the program to continue to participate after the first year.

Miller (2002) sited advantages to peer mentoring programs with one being the large numbers of students who can participate which far exceeds the number of faculty who can do the same. In addition, the experience of a peer mentor to assist a student having difficulty is very valuable since s/he may be more connected with the same types of issues. Seventy-five percent of respondents to this study remained in the peer mentoring program for at least six months to more than 12 months. I believe that when students have a positive experience, they want to share it with others. Kirkham and Ringlestein (2008) cited Whitman and Fife (1988) as saying "to teach is to learn twice" on mentoring. Therefore, additional work should be done in this regard to instill leadership in young scholars so that they are vested in making a strong impact on other students.

Research Question 2: Academic success. Their collective responses can be summarized looking at four questions having a few components from the PMASSE questionnaire. Academic success was evaluated by importance of participating in academic activities (e.g., attending class, studying alone, studying in small groups or attending non-required lectures or seminars), hours of study each week, GPA and credit hours earned. Respondents expressed that it was very important to attend class and study alone. They were more evenly distributed across the levels of importance for studying in small groups and attending non-required lectures or seminars. Therefore, it was decided that studying in small groups and attending non-required lectures or seminars were not measuring academic success as expected and were not carried forward for analysis. Respondents studied more hours of each

weekend than each weekday. The mean GPA at the end of the first year was 3.07 and the mean number of credit hours was 25.46.

Researchers (e.g., Campbell & Campbell, 1997; Feeman, 1999; Kahveci et al., 2006; Mangold et al., 2003; Pagan & Edwards-Wilson, 2003; Ross-Thomas & Bryant, 1994; Salinitri, 2005; Sorrentino, 2007; Wallace et al., 2000), have indicated a positive relationship or an impact of mentoring on student persistence and/or grade point average of undergraduate students. Baker and Griffin (2010) said that "at risk" students from diverse backgrounds, first generation and low socioeconomic status deserve further attention as related to mentoring in a study reporting evidence that positive interactions have a significant impact on promoting the success of student from underrepresented backgrounds.

Research Question 3: Social engagement. This question was addressed in the questionnaire by three questions with several specific components. Overall they addressed the students' perspective on feeling connected to various aspects of the college experience (e.g., faculty, advisors, friends, team sports, clubs and organizations). They were also asked if they participated in any campus activities independently or not and if they lived on or off campus during the first year. Ninety-seven percent of the first year students lived on campus. The responses indicated that they felt less connected to faculty, academic advisors and team sports than they were to friends, clubs and organizations. In terms of participating in activities of a social or cultural nature without the prompting of a mentor during their first year of college, they said that cultural arts types of events, exercise or physical fitness activities, and trying to better understand someone else's views by imagining how an issue looks from another's perspective and learning something that changed the way they understood an issue or concept were rated highest.

As indicated in the literature review of student engagement, Crisp and Cruz (2009), researched the impact of student connectedness and indicated that students who feel academically and socially connected to other students and faculty at their institution are more likely to graduate compared to those who are not connected. It was interesting to note that the students who responded to my questionnaire did not express a strong sense of connectedness to faculty but a number of them did express connectedness to friends. It is not clear if these friends are college students at the university or friends from home communities. The respondents to my study were current second year students in good academic standing. These students would need to be followed for additional time to assess their successful completion of college and how social engagement impacted a successful graduation. It would be interesting to do a study on the number of students in a cohort who return to campus social events years after graduation.

Research Question 4: Impact of peer mentoring on academic success and social engagement. The first statistically significant finding for overall impressions of the peer mentoring experience was the relationship between mentor being knowledgeable about things that would help the mentee to succeed in college and studying on weekdays. Next it was revealed that there was a statistically significant relationship between the mentor's background characteristic of race/ethnicity and the mentees belief that studying alone is important. Further analysis revealed that students thought that the mentor's racial/ethnic background was slightly important to not at all important as it relates to the academic success strategy of studying alone, even though studying alone was moderately to very important for the majority of respondents.

I was most curious about the relationship between academic success as related to the number of credit hours and the peer mentors racial/ethnic background. This study revealed that it was statistically significant that students who thought the mentor's racial/ethnic background

was very important, took fewer credit hours than students who did not think the racial/ethnic background was important at all. In addition, there were statistically significant findings for the relationships between average number of hours of studying on each weekday and each weekend with mentor availability as well as the relationship between mentees GPA and the mentors availability but the significant differences were based on very small numbers; therefore, further interpretations are not included and should be further evaluated.

There was also a statistically significant relationship between the importance of attending class as an academic activity and the mentor being intuitive. Students indicated that the higher they ranked their expectation of the mentor as intuitive, the more important attending class was to them. When mentors were described with expected characteristics (e.g., intelligent or trustworthy), the respondents expressed greater importance of attending class. When the mentor was described as dependable, studying alone had greater importance as an academic success strategy. The same is true for friendly and intelligent. These findings should be investigated further in a subsequent study with a larger sample.

On the other hand, there were no inferential statistically significant relationships between the ways the peer mentoring relationship aided the mentees academic success and attending class or studying alone.

As for social engagement, there were no statistically significant values for the mentor encouraging mentees to participate in social engagement activities and their academic success. However, it was important to note that students were more apt to independently participate in cultural or extracurricular activities even though the mentor encouraged them to participate.

Research Question 5: Relationship between peer mentoring, academic success, social engagement, and demographic variables. There were statistically significant

relationships between demographic variables and the peer mentoring experience and social engagement. The majority of the students were females between the ages of 18 to 20 who graduated from high schools with the graduating class of less than 500 students. They also identified the south as their primary geographical origin of the country. Those southern students who were first generation students indicated that they did not feel that the mentor agreement addressed changes that might occur during the first year of college. In addition, the students who identified with residence in the south were more connected to friends to a large degree. Another significant finding was that students whose father's highest level of educational attainment was "some college" responded that they agreed with their mentor at the outset of the mentoring experience to address their needs. Caucasian students expressed strong agreement that their mentor was knowledgeable about things that would help them to succeed in college. All other racial/ethnic groups also expressed strong agreement in this positive regard but those responses were not judged to be statistically significant. This is another instance where a larger sample might yield different results.

Based on responses to the PMASSE questionnaire, a small percentage of students participated in pre-college enrichment programs. Approximately 20% of all the students who responded positively to this question participated in a pre-college enrichment program called Project SEU. Those students also expressed that their mentor was knowledgeable about things that would help them to succeed in college. When asked about communication with their mentor, it was statistically significant that 32% African American students communicated with their mentor a few times a month during the second semester as compared to 12% of non-African American students who communicated a few times a month during the second semester of the first year of college. Very few in either group communicated more frequently than a few times a

month. The highest percentage of Caucasian students (33%) communicated about once a month with the mentor during the first semester of the first year as compared to 16% of non-Caucasian respondents who communicated about once a month.

The majority of all students, without regard for the size of their graduation high school class agreed that the amount of communication with their mentor was appropriate. In terms of race/ethnicity and connectedness to social engagement on campus, Caucasian and Hispanic students were more connected to clubs and organizations to a moderate to large degree while first generation students were connected to a minimum to moderate degree. The majority of students who responded to the questionnaire did not express a strong connectedness to team sports.

According to the definition used at SEU, for being considered a first generation college student—a student must have at least one parent who did not receive a 4-year undergraduate degree. Consequently, less than half of the students in my sample were considered first generation. In terms of race/ethnicity of the respondents as they relate to the background characteristics of their mentor, their responses were different from those investigated by Reddick (2006) wherein he looked at African American mentors at primarily White institutions and found that the mentors who went to historically black colleges or universities and were committed to assist African American undergraduate students as they navigated a campus environment. The respondents to my study indicated that race/ethnicity of the mentor was not statistically significant. This is worthy of additional investigation by face-to-face interviews or a quantitatively larger sample of the population. Ortiz-Walters and Gilson (2005) surveyed 400 Ph.D. students of color to investigate the satisfaction of mentoring experiences of African, Hispanic and Native Americans in the academic setting. They found that their interpersonal

comfort and commitment to the relationship was greater when levels of similarity were greater (e.g., surface level, having similar racial/ethnic background, and deep-level, having a mentor or protégé who is perceived to share similar values). The sample of students that participated in this research did not prove this to be true. Taking into account differences in educational level, age and focus of a Ph.D. student as compared to a first year college student may explain the differences to some degree but further investigation is warranted to really tease out differences and similarities.

In addition, Santovec (1992) observed that peer mentoring is a viable approach to assisting freshman students as they transition into the university environment by providing role models and leadership particularly for underrepresented students since faculty are not always ethnically diverse or readily available.

Implications

From a practice perspective, this study highlights the need to develop leadership among a diverse population of first and second year students involved in peer mentoring programs on college campuses. Similar to a study by Kezar and Moriarty (2000), there is a need for student affairs administrators to rethink key assumptions about leadership development models and practices particularly among a diverse student body so that traditionally underserved students will desire to continue in peer mentoring programs to assume leadership roles to ensure the success of other students but particularly those who look like them.

This study has given voice to respondents by disclosing their perceptions of the peer mentoring experience that they had during their first year of college. This study provides evidence about the perceived quality of peer mentoring as it relates to college success and

encourages these and other students to effect change to make the experience better for other students.

From a policy and scholarship standpoint, I agree with the conceptual framework for the Student Peer Assisted Mentoring (SPAM) program presented in the literature by Kirkham and Ringelstein (2008) and would push for such a model that provides supplemental instruction for students that are involved as mentees and/or peer mentors under the supervision of academic leaders. Others who have used this, or similar, approaches to enhancing student experiences have reported a number of benefits as related to student performance and retention (e.g., Smith-Jentsch et al., 2008; Wright-Harp & Cole, 2008).

Recommendations for Further Research

There were several statistically significant findings in this study. It would be most beneficial to explore many of these findings more carefully using a mixed methods research design. This will enable me to further explore unique findings (e.g., the impact of a father's highest level of educational attainment to a student's academic success in college, the association between credit hours and peer mentor's background characteristics) by the use of focus groups or individual interviews.

There were some limitations in this study that should be addressed in subsequent studies involving the process used to solicit students to participate in the research study. Electronic communication was used solely to correspond with students who qualified to participate during the spring semester of the academic year. The timing was such that when I was permitted by the IRB boards at both universities to gather data, there were only a few weeks before the end of the semester and students were preparing for final exams and end of the semester assignments.

Weekly emails were sent and incentives were offered but the timing was not optimal for the best results.

The listserv of students who participated during the academic year of 2011–12 was created by the advising office in order to maintain confidentiality regarding the students' identity. This was helpful in maintaining anonymity for students but not for matching respondents with institutional data.

The questionnaire was created using expert and student readers then pilot tested before distributing to students for the study but a few important factors were not considered at outset. Namely, the way the institution gathers demographic information. The question on the questionnaire regarding regional identity, students were asked to identify north, south, east, or west. The institution does not use this method of identifying this information. Instead, they ask students to identify the state that they live. Because I did not realize this at the outset, I could not match the institutional data with the student responses.

The sample size was reduced because many students started the questionnaire but did not complete it. Therefore, the incomplete data was deleted before conducting the analysis. This greatly reduced the sample size and the inability to do further analyses of some variables. The timing of launching the questionnaire near the end of the spring semester may have conflicted with students reading days and exam schedules. An additional factor to consider is that students at SEU are bombarded at certain times of the year with surveys and they have indicated that many requests are ignored or deleted from their inbox.

Conclusion

As a researcher**,** there were a number of findings that raised my eyebrows and made me want to know more from the students than I was able to uncover with this study utilizing a

quantitative research design. One such curious finding was the background characteristics that students expected of their mentor to be intuitive as it relates to higher academic success. Are students putting more of their focus on the mentor's qualities than on developing their own characteristics to make them successful? Another important finding was that the more the mentor was described as dependable, the greater the importance of studying alone. These and other findings are worthy of additional qualitative or mixed methods research exploration or should be explored with a larger sample. I am more committed than ever to explore these findings and to champion students who might otherwise leave the educational setting feeling disenfranchised.

It became apparent that though some of the expected relationships were reported (e.g., the feelings of connectedness to friends more than faculty or academic advisors) but other relationships were not expected (e.g., the relationship of a father's highest educational level and mentees needs being addressed). There was no statistical significance to the mother's educational level as related to peer mentoring, academic success or social engagement based on the questions asked in this study. I am curious to know more about the perspectives of these young scholars and the role of the parent's education in their perceptions regarding access to information to succeed in college.

As a student support services administrator, I am more sensitive to the perceptions of today's students. Although these respondents indicated that race/ethnicity is not important in a peer mentor, I have communicated with a number of underserved students who share things with me behind closed doors that I do not believe they feel comfortable sharing with others. I see the faces of racial/ethnic minority students and professionals light up when I enter a room to speak in the capacity of an authority figure. Therefore, I sense that it does make a difference for them

even if they do not communicate it through a questionnaire such as the one that I administered for this research study.

As an effective leader, I take pride in being visionary. I want to use this research as a launching pad to encourage students to achieve their highest educational and personal goals. I will share the information learned with other professionals and students. I plan to articulate the vision of effective mentorship to help others in their journey to realize potential that they might not otherwise realize that they possess. A visionary leader, in my opinion is one who is able to look at an assortment of puzzle pieces and know that s/he is able to outline a plan to put the pieces together over time and create the visually pleasing masterpiece on the puzzle box. That person is me!

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Appendix A

Consent Form

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH SURVEY

Study Title: Relationship of Peer Mentoring to Academic Success and Social Engagement
Principle Investigator: Brenda O. Mitchell
Faculty Advisor: Ceola Ross Baber, Ph. D.

Dear Respondent,

I am inviting you to participate in a research project to study the relationship of peer mentoring to academic success and social engagement. You are being asked to participate because you are a second year student who participated in the peer mentoring program for Carolina Covenant and Minority Advising Program at UNC-CH. The procedure involves completing a questionnaire that will take approximately 30 minutes. The survey questions will be about your peer mentoring experience, academic success and social engagement. Through your participation I hope to understand the impact of peer mentoring on your college success academically and socially. You must be at least 18 years old to participate.

I will do my best to keep your information confidential. To help protect your confidentiality, the survey will not contain information that will personally identify you, and I will not ask for your name. All information collected in this study will be kept completely confidential to the extent permitted by law.

There should be minimal to no risk for a survey; however, background questions will be asked to help understand the relationship across all participants.

Please note that absolute confidentiality cannot be guaranteed due to the limited protections of Internet access. Your participation in this online survey involves risks similar to a person's everyday use of the Internet.

Your email address will be requested so that we are able to enter you in a drawing for a gift card and possibly to invite you to a follow-up group session. However, you are not obligated to participate in the follow-up group session. Your email address will be stored separately from any data collected in the study.

This project has been approved by the Institutional Review Board (IRB) at North Carolina A&T State University.

Appr: 03-14-2013
Exp: 03-13-2014

Your participation is voluntary and there is no penalty if you do not participate. You may stop the survey at any time or skip any questions you do not wish to answer.

If you have any questions about completing the questionnaire or about being in this study, you may contact me at brenda_mitchell@med.unc.edu. You may also contact my research advisor, Dr. Ceola Ross Baber at crbaber@ncat.edu. If you have any study-related concerns or any questions about your rights as a research study participant, you may contact the Office of Research Compliance and Ethics at North Carolina A&T State University at (336) 334-7995.

By completing this survey, you are indicating that you at least 18 years old, have read this document, have had any questions answered, and voluntarily agree to take part in this research study. You may print a copy of this consent agreement for your records.

Sincerely,

Brenda O. Mitchell
Ph.D. Candidate, North Carolina A&T State University

Appendix B

IRB Approval

NC A&T DIVISION OF RESEARCH AND ECONOMIC DEVELOPMENT
1601 East Market Street
Greensboro, NC 27411
(336) 334-7314
Web site: http://www.ncat.edu/~divofres/compliance/irb/index.php
Federalwide Assurance (FWA) #00000013

To: Brenda Mitchell

From: Behavioral IRB

Authorized signature on behalf of IRB

Approval Date: 3/14/2013
Expiration Date of Approval: 3/13/2014

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Initial
Expedited Category: 7.Surveys/interviews/focus groups,5.Existing or non-research data
Study #: 13-0032

Study Title: Relationship of Peer Mentoring to Academic Success and Student Engagement

This submission has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

Study Description:

The purpose of this explanatory mixed methods study is to examine the relationship between peer mentoring, academic success, and social engagement of second year college students at a research university in the southeastern United States.

Regulatory and other findings:

This research meets criteria for a waiver of written (signed) consent according to 45 CFR 46.117(c)(2).

Investigator's Responsibilities:

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

When applicable, enclosed are stamped copies of approved consent documents and other recruitment materials. You must copy the stamped consent forms for use with subjects unless you have approval to do otherwise.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented. (Use the modification form at ohre.unc.edu/forms.) Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB using the adverse event form at the same web site. **If you are conducting research in a location other than North Carolina A&T State University, such as an agency, organization, or school, you must provide written approval from an authorized representative (for example, the superintendent's office for research conducted in a public school) prior to conducting your research.**

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

CC:
Ceola Ross Baber, Leadership Studies

Appendix C

Peer Mentoring, Academic Success, and Social Engagement (PMASSE) Questionnaire

Relationship of Peer Mentoring to Academic Success and Student Engagement

1. **Which of the following did you and your mentor agree upon at the outset of the mentoring relationship?**

☐ How often you would meet each week (e.g., check in every Monday).

☐ Which method(s) of communicating you would use (e.g., face-to-face, phone, internet social media).

☐ Changes that might occur during the first year of the peer mentoring relationship

☐ Addressing your (mentee) needs to ensure success in college.

☐ None of the above

2. Please respond to the following statements as you reflect on your overall impressions of your peer mentoring experience. Please indicate the degree to which you agree or disagree with each statement.

	Strongly Agree	**Somewhat Agree**	**Neutral**	**Somewhat Disagree**	**Strongly Disagree**
I had a clear understanding of the Peer Mentoring Program at the beginning of the program.					
My mentor was very knowledgeable about things that would help me to succeed in college.					
My mentor demonstrated the desire to share his/her knowledge with me.					
My mentor was available when I needed him/her.					
My mentor and I had a trusting relationship.					
Expectations were clearly communicated					
I took full advantage of the peer mentoring program.					

The amount of communication with my mentor was appropriate					
The type of communication with my mentor was appropriate					
The focus was on my needs during the program.					

3. Thinking about your **first** semester of your **first** year of college, on average how often did you and your mentor communicate by any means?
   - ☐ More than once a week
   - ☐ About weekly
   - ☐ A few times a month
   - ☐ About once a month
   - ☐ Less than once a month
   - ☐ Not at all

4. Thinking about your **second** semester of your **first** year of college, on average how often did you and your mentor communicate by any means?
   - ☐ More than once a week
   - ☐ About weekly
   - ☐ A few times a month
   - ☐ About once a month
   - ☐ Less than once a month
   - ☐ Not at all

5. In your experience in the peer mentoring program in your **first** year, about how many times did you do each of the following?

	Never	Once or twice	3-5 times	More than 5 times
Discussed ideas from your readings or classes with your peer mentor outside of class	☐	☐	☐	☐
Had serious conversations with your peer mentor about **religious beliefs**	☐	☐	☐	☐
Had serious conversations with your peer mentor about **political opinions**	☐	☐	☐	☐
Had serious conversations with your peer mentor about **personal values**	☐	☐	☐	☐

6. For you personally, how important is each of the following background characteristics of a mentor?

The peer mentor's…

	Very Important	Moderately Important	Slightly Important	Not at all Important
Age	☐	☐	☐	☐
Race/Ethnicity	☐	☐	☐	☐
Major	☐	☐	☐	☐
Gender	☐	☐	☐	☐
Economic status	☐	☐	☐	☐
Geographical origin (e.g., state or region)	☐	☐	☐	☐
Area of origin (e.g., urban, rural, suburban)	☐	☐	☐	☐
Physical appearance (e.g., looks like you)	☐	☐	☐	☐

7. Please think about what you expect from a peer mentor and use 'drag and drop' to order the following descriptors from most important (top of the list) to least important (bottom of the list).

Approachable
Available
Dependable
Friendly
Intelligent
Intuitive
Organized
Thoughtful
Trustworthy

9. To what extent did each of the following describe your peer mentor during your **first** year of college?

	To a Large extent	To a Moderate extent	To a Minimal extent	Not at all
Approachable	☐	☐	☐	☐
Available	☐	☐	☐	☐
Dependable	☐	☐	☐	☐
Friendly	☐	☐	☐	☐
Intelligent	☐	☐	☐	☐
Intuitive	☐	☐	☐	☐
Organized	☐	☐	☐	☐
Thoughtful	☐	☐	☐	☐
Trustworthy	☐	☐	☐	☐
Other, specify_____	☐	☐	☐	☐

10. Has peer mentoring aided you in any of the following ways during college? Please check all that apply.
    - ☐ Selection of a major
    - ☐ Maximizing your Grade Point Average (GPA)
    - ☐ Navigating the university academic environment
    - ☐ Navigating the university social environment
    - ☐ Taking advantage of university resources (e.g., career services, learning center, writing center or others)
    - ☐ Other activities or resources (specify)

11. In total, how long did/have you participate(d) in the peer mentoring program, as mentee and/or mentor?
    - ☐ Less than 1 month
    - ☐ 1 to 3 months
    - ☐ 3 to 6 months
    - ☐ 6 to 12 months
    - ☐ More than 12 months

12. If you are still participating in the peer mentoring program, in what capacity are you participating?
    - ☐ Mentee
    - ☐ Mentor
    - ☐ Program Assistant
    - ☐ Other, specify
    - ☐ No longer participating

13. In your **first** year of college, how important did **you** feel it was to participate in the following academic activities?

	Not at all Important	Slightly Important	Moderately Important	Very Important
Attend class	☐	☐	☐	☐
Study alone	☐	☐	☐	☐
Study in a small group	☐	☐	☐	☐
Attend non-required lectures or seminars	☐	☐	☐	☐

14. On average during your first semester of your first year, how many hours did you study each **weekday**?
    - ☐ Less than 1 hour
    - ☐ 1.1- 2 hours
    - ☐ 2.1- 3 hours
    - ☐ 3.1- 4 hours
    - ☐ 4.1- 5 hours
    - ☐ More than 5 hours

15. On average during your first semester of your first year, how many hours did you study each day on **weekends**?
    - ☐ Less than 1 hour
    - ☐ 1.1- 2 hours
    - ☐ 2.1- 3 hours
    - ☐ 3.1- 4 hours
    - ☐ 4.1- 5 hours
    - ☐ More than 5 hours

16. At the end of your first year, how many credit hours had you successfully completed at your university? Do not include AP (advanced placement) credits.

☐ Less than 6 hours
☐ 6-12 hours
☐ 13-21 hours
☐ 22 -30 hours
☐ More than 30 hours

17. What was your GPA at the end of your **first** year of college?

☐ Less than 2.0
☐ 2.1 – 2.5
☐ 2.6. - 2.9
☐ 3.0 -3.5
☐ 3.6 or above

18. To what degree did you feel connected to each of the following during your first year of college?

	To a Large Degree	To a Moderate Degree	To a Minimal Degree	Not at all
Faculty in your department	☐	☐	☐	☐
Academic advisors	☐	☐	☐	☐
Your friends	☐	☐	☐	☐
Team sports	☐	☐	☐	☐
Clubs and organizations	☐	☐	☐	☐

19. After reading the statements to the left below, please indicate in **Column A** whether **you did** the activity during your first year of college. Regardless of whether you did the activity, please indicate in **Column B** whether your **peer mentor encouraged** you to do it. On each row, please check one box in Column A **and** one box in Column B.

	Column A Did **You** Do This? **Yes**	**No**	**Column B** Did **Mentor Encourage** This? **Yes**	**No**
Attended an art exhibit, play, dance, music, theatre, or other performance	☐	☐	☐	☐
Exercised or participated in physical fitness activities	☐	☐	☐	☐
Participated in activities to enhance your spirituality (worship, meditation, prayer, etc.)	☐	☐	☐	☐
Examined the strengths and/or weaknesses of your own views on a topic or issue	☐	☐	☐	☐
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	☐	☐	☐	☐
Learned something that changed the way you understand an issue or concept	☐	☐	☐	☐
Joined a social organization (e.g., Greek sorority/fraternity, special interest clubs).	☐	☐	☐	☐
Participated in community service activities (e.g., volunteering for an organization, assisting disabled individuals in the community without pay)	☐	☐	☐	☐
Other activities that your peer mentor encouraged you to do (specify)_____	☐	☐	☐	☐

20. In your **first** year of college, did you live on campus or off campus?

☐ On campus
☐ Off campus
☐ Some of each

21. What is your gender?

☐ Male
☐ Female

22. What is your age?

☐ 18-20
☐ 21-25
☐ 26-30
☐ over 30

23. What is your racial/ethnic identity? Check all that apply.

- ☐ African American
- ☐ American Indian
- ☐ Caucasian (non-Hispanic)
- ☐ Hispanic
- ☐ Pacific Islander
- ☐ Other (please specify)

24. What region of the country do you identify with most as your permanent residence?

- ☐ North
- ☐ South
- ☐ East
- ☐ West

25. How many (AP) advanced placement credit hours did you earn in high school which counted toward your total college credits?

- ☐ None
- ☐ Less than 3 credit hours
- ☐ 4-6 credit hours
- ☐ 7-9 credit hours
- ☐ More than 9 credit hours

26. What was the size of your graduating class at your high school?

- ☐ Under 100 students
- ☐ 101–200 students
- ☐ 201–500 students
- ☐ 501–1000 students
- ☐ Over 1000 students

27. Were you involved in any enrichment programs prior to entering college? Please check all that apply.

- ☐ Talent Search
- ☐ Upward Bound
- ☐ Project SEU
- ☐ AHEC (Area Health Education Centers) Pipeline Programs
- ☐ Other, specify

28. Are you the first person in your immediate family to attend college?

☐ Yes
☐ No

(If yes – skip to the end. If no – answer the next 2 questions.)

29. What is the highest educational level of your father or the person who was your primary father figure when you were growing up?

☐ Less than high school
☐ High school diploma or GED
☐ Some college
☐ College graduate
☐ Postsecondary coursework or degree

30. What is the highest educational level of your mother or the person who was your primary mother figure when you were growing up?

☐ Less than high school
☐ High school diploma or GED
☐ Some college
☐ College graduate
☐ Postsecondary coursework or degree