A CASE FOR PEER-TO-PEER MENTORING IN TECHNICAL COLLEGE EDUCATION

by

MICHAEL COOK

(Under the Direction of Elaine Adams)

ABSTRACT

Technical education in Georgia provides training opportunities across many disciplines to promote economic growth. Completion and retention rates in technical education are typically lower when compared to traditional four-year universities. This action research study investigated the impact peer-to-peer mentoring had on students’ engagement, academic confidence, and satisfaction with their technical college, items suggested by exiting research to affect student persistence. A conceptual peer-to-peer mentoring model was created using popular persistence theories and tested over the course of one semester. Participants followed a specific mentoring curriculum designed to emphasize student engagement, academic confidence, and institutional satisfaction. Qualitative and quantitative data were collected to measure the effects of having a peer mentor and answer the research questions. Participant narrative data was collected throughout the course of the study and various changes were incorporated after analysis of data in an effort to improve the mentoring experience. Participant experiences’ were provided in narratives to provide the reader insight into the mentoring experience. Findings from the research suggest the presence of a peer mentor had a positive effect on participants’ engagement and academic confidence, but little impact on institutional satisfaction. While all participants reported increases in variables measured, females and minority students reported the greatest benefit from having a mentor over the course of the semester. Findings from the research
illustrate the value of a peer mentor and add to the limited literature regarding technical college students. Additionally, the conceptual model tested revealed several limitations which led to the creation of a revised conceptual model for future testing.

INDEX WORDS: Technical Education, Peer Mentoring, Action Research, Narrative Analysis, Mentor, Mentee
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BS, Mercer University, 1999
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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2015
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December 2015
DEDICATION

First and foremost, I dedicate this dissertation to my wife Angie for her love and support during this endeavor. I know I was not the most pleasant at times. You overlooked my occasional unpleasantness by offering encouragement and assuming additional home responsibilities to allow me to focus on the task at hand. Thank you. I love you.

I would also like to dedicate this to my late father, Eddie Cook, who instilled in me a strong work ethic and taught me that quitting was not an option. I miss you Dad and know you would be proud of my accomplishments.
ACKNOWLEDGEMENTS

I would like to thank my wife and children for their unwavering support in completing this task. Without you, I would not have found the will to persevere. I love you all.

Words cannot express the gratitude I have for my major professor, Dr. Elaine Adams. Your kindness, encouragement, feedback, and expertise enabled me to complete this project. It has been an honor to work under your guidance. Thank you. Also, I would like to thank my committee members, Dr. Myra N. Womble and Dr. John Mativo. Your advice and time devoted to this project are invaluable.

I would also like to acknowledge my technical college family. Your friendship and support of my research are extremely appreciated. Lastly, I want to thank Dr. Randall Peters, Dr. Dawn Hodges, and Dr. Rhonda Morgan. Your willingness to serve as my expert panel, read drafts, and provide guidance along the way was critical to my success. Thank You.
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CHAPTER 1
INTRODUCTION: PEER-TO-PEER MENTORING
IN TECHNICAL COLLEGE EDUCATION

Beginning a college education does not guarantee successful completion. Approximately 58% of first-time, full-time students complete a bachelor’s degree at their institution of choice within six years (National Center for Education Statistics [NCES], 2011). The completion rates of those entering a two-year community college is typically much lower with 35% completing a degree after three years and 46% dropping out.

Educators face many challenges in understanding student motivation to attend college and complete a degree program. These challenges include identifying individual motivators that generate student interest and engagement as well as aspects of college life that create student satisfaction (Astin, 1993; Beachboard, Beachboard, Li, & Adkinson, 2011; Berger & Milem, 1999). Students attending a technical college have similar experiences (Post, 2013). They struggle with their academic work and are underprepared for the academic journey that awaits them (Christie, Tett, Cree, Hounsell, & McCune, 2008). Often times, learners find themselves overwhelmed by the rigor of academic work, are unable to integrate into the social fabric of the institution, lack a clear vision or direction, or are ill equipped for higher education (Tinto, 1987). While experiencing many, if not all of these struggles, technical college students are often the first in their families to attempt post-secondary education. They are at particular risk of failing to complete their academic program. Students who have difficulty embedding themselves into the social structure of the school have a higher tendency to fail in their academic endeavors.
However, students who are otherwise at risk of dropping out may succeed if they find themselves in a social environment where their peers reinforce behaviors contributing to successful completion (Tinto 1975).

For all college students, the number of remedial courses a student has to take, as well as other academic indicators such as grade point average and previous academic experience, are also predictors of academic success (Chen & Carroll, 2005). First-generation students typically begin their college experience with a less developed “package of assets” than students from families with college experience (Collier & Fellows, 2008, p. 8). Chen and Carroll (2005) discovered that, academically, first-generation students were at a greater risk for poor performance, noting that 49% of incoming first-generation students in their study needed remedial coursework as compared to 33% of students from families indicating higher levels of education. According to Engle and Tinto (2008), approximately 24% of first-generation undergraduate students are from low-income families. The correlation between success and income is evident with only 11% of low-income, first-generation students graduating a four-year post-secondary education compared to a 55% graduation rate for those more advantaged after six years (Engle & Tinto, 2008). The level of preparation is key because students from families with incomes of $70,000 or greater, completed a two- or four-year degree program at the rate of 65%. Students whose backgrounds have not adequately prepared them for college need additional support to help them gain confidence to proceed through the course content and to persist through the end of their degrees (Collier & Fellows, 2008).
Understanding Student Departure

First year college students fail to persist for numerous reasons. Responsibilities and
expectations often overwhelm first-year students. First-year students often struggle to build
social relationships with fellow students (Tinto, 1975). Technical college students typically lack
the support system a traditional four-year student possesses and many are working adults seeking
training to improve their station in life (Chen & Carroll, 2005). The most common reasons
identified in the literature for student departure are academic difficulty, uncertainty, lack of
commitment, lack of or unclear goals, and inability to adjust both socially and academically
(Berger & Milem, 1999; Chen & Carroll, 2005; Tinto, 1975, 1987). Researchers found that
individual attributes such as race, gender, academic ability, family background, and precollege
experience play important roles in students’ ability to complete their educational goals (Crisp,

According to national statistics, student demographics for those enrolled in the technical
college selected for this study were similar to those in other two-year or less institutions (NCES,
2012a; Technical College System of Georgia [TCSG], 2014a). They included a large minority
population, predominantly female, and a high number of students requiring remedial courses
(TCSG, 2014a). While data was limited on specifics of technical college students’ family
backgrounds, these students tended to come from a lower socioeconomic status when compared
to traditional four-year students and many came from single-parent homes receiving state and
federal aid (TCSG, 2014b). Technical college students usually have little to no college
experience as evidenced by higher percentages requiring learning support (TCSG, 2014c).
According to Tinto (1975, 1997), students lacking familiarity with the college experience are less
likely to be fully integrated into the social and academic culture of their college, a factor shown
to be extremely important during the first year of college. Student-faculty interactions, advising, personal and career counseling, and informal socializing have shown success by increasing persistence rates of those unfamiliar with the college experience (Tinto, 1997). Providing first-year students with additional support through a structured mentoring program may improve their ability and eagerness to persist with their certificate or degree programs at technical colleges (Hulbert, 2014).

**Technical College**

Technical colleges in the Technical College System of Georgia are two-year institutions granting Associate of Applied Science degrees, diplomas, and certificates in Business, Computer Technology, Health Care, Personal Services, Public Safety, and Technical and Industrial programs. The technical college where this study was conducted as of January 2014 employed 116 full-time faculty, 206 adjunct faculty, and 207 administrative and staff personnel. The enrollment during AY2013 included 7,758. Students enrolled in the Business Management associate degree program, the area of interest for this research study, accounted for 8% (621 students) of this enrollment (TCSG, 2014d).

State data reporting graduation rates for the college of interest revealed a 52% completion rate for students enrolled in a degree, diploma, or certificate program (TCSG, 2014e). Federal graduation data for this college reported a 19% graduation rate for students enrolled during AY 2010 (NCES, 2012). Discrepancies between the two agencies have numerous possibilities which are beyond the scope of this study; however, either reported graduation rate justifies prescriptive action. A self-report instrument summarizing college-wide statistics indicated that nearly 79% of graduates held employment in their field or a related field (TCSG, 2014f).
Technical college students often face challenges that make it difficult for them to complete their educational programs. Of the total enrollment for the college in this study, 43% were comprised of first-generation students and 38.8% are over the age of 25 (TCSG, 2014d). This suggests that roughly 50% of these students do not have a reference point in their own families by which to gauge their college experience (Adams & Corbett, 2010). Naturally, these students will experience anxiety as they attempt to rise to the task of mastering advanced skills (Tinto, 1975). Many of these students are seeking career changes after experiencing unemployment or other personal crises (Hoover, 2011). Essentially, success for these students will be any achievement that gets them back on their feet after their personal lives have been radically altered by loss of employment, personal crises in their immediate families, or substantial housing or relationship challenges (Jeffreys, 1998). A large number of these students have full-time caregiver responsibilities in addition to being students and, in some cases, are full-time employees. Although they carry heavy workloads, most of them have returned to college because they believe in the possibilities that an education can provide. These students face additional challenges because their time must be divided between academic work and other responsibilities. Difficulties faced by technical college students are often compounded because many have not received the most optimal preparation for success in college or have been out of school for a considerable amount of time. Hence, the need to infuse programs designed to enhance these students’ collegiate success.

**Mentoring as a Potential Solution**

Many technical college students face obstacles, large or small, that potentially deter them from achieving their educational goals. Peer mentoring programs have been used to help students assimilate to the changes and demands of college and have been found to be a critical
component of student success (Astin, 1993; Crisp, 2010; Jacobi, 1991; Tinto, 1975). One
possible benefit to a peer-mentoring program would be an increase in students’ persistence
and/or desire to complete their programs of study. As students’ involvement in college life,
especially its academic life, increases so will students’ acquisition of knowledge and
development of skills (Endo & Harpel, 1982). Non-involvement with campus life has a powerful
negative impact on student outcomes (Astin, 1993). Involvement with academics, faculty, and
student peers are the most potent forms of positive involvement. Students who report higher
levels of contact with peers and faculty also demonstrate higher levels of learning and
persistence during their stay in college (Endo & Harpel, 1982). Building supportive peer groups
help students make the transition to college and integrates them into a community of peers.
Meeting people and making friends when beginning college is a major preoccupation of student
life (Tinto, 1997). This link, which has been extensively studied in four-year universities, may
help students succeed if applied to the two-year technical school model (Budge, 2006; Campbell

Peer mentoring may serve as a catalyst in improving student self-confidence and reduce
anxiety (Rodger & Tremblay, 2003). One key measure of whether students succeed is their
beliefs about themselves and what they are capable of achieving. This measure, called self-
efficacy, has been shown to correlate with student success in educational settings (Chopin,
Danish, Seers, & Hook, 2012). It is possible that a peer mentoring program may encourage or
facilitate an increase in students’ self-confidence, leading to greater skill achievement and an
overall higher level of academic success. Academic success is correlated with student
persistence and program completion (Tinto, 1975). For technical college students, experiences
from elementary or secondary school may make them believe they cannot succeed at various
academic tasks (Collier & Fellows, 2008). Peer mentoring may be part of the solution to this problem. Peer mentoring allows students to share their concerns and struggles, if any exist, with another student in a similar situation. Students have someone to go to with concerns, allowing them to be more comfortable, perhaps, in the class setting. Higher academic success has been correlated with higher self-efficacy, but even without the probable good academic outcomes, it is likely that mentoring will allow students to feel more confident about their participation (Chopin et al., 2012).

**Purpose of the Study**

The purpose of this study was to use action research to explore the impact of peer mentoring on students' engagement, academic confidence, and satisfaction with their technical college experience. Too often, students begin the semester with the best of intentions but are derailed by any one of many factors. These might include the inability to fulfill or manage course requirements (Willging & Johnson, 2004), fear of failure or disconnect with the school experience or faculty (Johnson, 1997), scheduling issues (Doherty, 2006), and/or ability to balance school and other personal responsibilities (Nakajima, Dembo, & Mossler, 2012). The presence of a peer mentoring group may lead to improved relationships among class members, increased student accountability, and a feeling of shared educational support. Potentially, peer mentoring will have a positive effect on a wide range of factors including students' confidence in their ability to complete coursework, improved attendance, and reduction in student withdrawal (Eggens, Van der Werf, & Bosker, 2008; Zhao, & Kuh, 2004).

Participation in this study was voluntary. Participants were self-selected students from an Introduction to Business class (MGMT 1120), a commonly chosen beginning management course. Mentor participation was voluntary as well, with mentors chosen from Team Project
(MGMT 2215), the management capstone course. While many traditional mentoring studies use one-on-one mentoring, random selection was used to assign two mentees to each participating mentor (Howard & Smith-Goodwin, 2010). Several reasons influenced the decision to have mentors provide mentoring to multiple mentees. First, there was the strong possibility of a smaller number of available mentors than those seeking mentoring. Secondly, a group of people actively engaged in learning together has shown potential in increasing student success rates (Beachboard et al., 2011; Howard & Smith-Goodwin, 2010).

One of the challenges of action research is that it must, by definition, be actionable: that is, the typical practitioner does not have unlimited resources, time, or money to complete the work nor does the researcher get to pick the perfect subjects. This study was designed to take advantage of these limitations of action research, turning them instead into strengths. This study attempted to answer the following questions:

1. Does a peer-to-peer mentoring program increase student engagement?
2. Does a peer-to-peer mentoring program increase students' academic confidence?
3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?
4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
Supporting Theories

The theoretical framework for this study was based on research conducted by Tinto (1975), Astin (1984), and Berger and Milem (1999). Tinto (1975) sought to explain the relationship between student persistence and social and academic integration into college, and found that students are more persistent when they experience higher levels of academic and social integration in school. Astin (1984) proposed that the level of involvement a student experiences in social and academic integration positively correlates with student satisfaction and persistence, furthering the work done by Tinto (1975). Berger and Milem (1999) sought to identify how student behaviors and perceptions influenced social and academic integration. In terms of a theoretical framework, the working hypothesis was that a formal mentoring program emphasizing social and academic components would positively affect student engagement, academic confidence, and institutional satisfaction.

Researchers have long sought to understand how student integration into their college correlated with student success. Spady (1970), proposed one of the first models theorizing that individuals who failed to integrate into college life experienced higher dropout rates and mimicked those in society who failed to integrate with higher suicide rates. Building upon the work conducted by Spady (1970), Tinto (1975) created the longitudinal model for college dropout which suggests that academic involvement for first-year students is played out against a backdrop of social issues and concerns over social inclusion. Additionally, Tinto (1975) proposed that the interplay between the individual’s commitment to the goal of college completion and his commitment to the institution itself determines whether or not the individual decides to abandon his educational program. Social and academic integration were suggested as the two main areas that directly affect student dropout decisions. Social integration consists of
peer-group relationships and faculty relationships. Academic integration focuses on grade
performance and intellectual development. By establishing relationships with peers and faculty,
students show greater levels of persistence when measured against those without relationships
(Tinto, 1975). Furthering work on his initial theory, Tinto (1997) found that a first-year
student’s social integration played a significant role in success within both the academic and
social system. He characterized these systems as two nested spheres, with the academics
occurring within the broader social network of the campus. Social and academic lives are
interwoven, and social communities emerge from the activities in the classroom.

As a student progresses and establishes social integration during the first year of their
degree, their concerns shift toward a greater emphasis on academic issues (Tinto, 1997). To
foster the building of social systems, assigned student mentors tasked with acclimating new
students into the college environment, mimicking the mentoring relationship in the business
world, could possibly be the solution. Those with proven experience could help prepare
inexperienced students on class preparation and navigating the inner-workings of the college.
Benefits include improvement in study skills and habits, as well development of critical thinking
and problem-solving skills (Good, Halpin, & Halpin, 2000).

Additional theoretical support for this study was derived from work conducted by Astin
(1984) and his theory of involvement which proposes that students who experience academic and
social integration, physically and psychologically, into an institution will essentially learn more
than those who fail to integrate academically and socially. College satisfaction and retention
were shown to increase as levels of engagement and academics increased. Astin’s (1984)
research also suggests that institutions play a critical role in fostering interactions between
faculty and students with greater faculty interaction producing greater student integration. These
interactions can take place both in and out of the classroom and it is suggested that institutions provide opportunities for them to occur. A mentoring program with components requiring interaction with peers and faculty could produce similar results by increasing participants’ satisfaction with their college and confidence to succeed.

Berger and Milem (1999) sought to expand on previous research conducted by Astin (1984), building on his original theory of involvement and Tinto’s (1975, 1997) student departure theory. Using the existing research as a framework, Berger and Milem’s (1999) work sought to explain how behavioral involvement and perceptual integration contributed to a student’s persistence in college. The research attempted to identify the actual sources of social and academic integration which correlated with increased completion rates and student satisfaction.

In order to understand what constitutes social and academic integration, Berger and Milem (1999) examined the following variables: individual background characteristics, the students’ commitment when beginning their education, how involved they were mid-way through their fall semester, their mid-fall perceptions of their education, their involvement mid-spring, their academic and social integration, and overall commitment at the conclusion of the study. The researchers used a combined model to measure behavioral and perception responses from the students and translated these into persistence measurements.

Results from the research revealed that female students drew more positive effects from peer relationships and institutional commitment. Students who noted involvement early during the fall semester appeared to have a positive spring involvement, which likely had a direct impact on the student’s social and academic integration, their institutional commitment, and desire to persist. The study also suggested that previous research underestimates the role
involvement plays in student persistence. Students who did not become involved early were less likely to persist, while early involvement with faculty and peers produced positive benefits for first-year students (Berger & Milem, 1999). Mentoring can facilitate the formation of early involvement with peers as well as provide information about what technical college students believe are sources for social and academic integration. Additionally, mentoring can perhaps increase institutional commitment leading to an increase in one’s satisfaction with their technical college.

The relationship between mentoring and social as well as academic integration is grounded in the assumption that mentoring is a “helping” relationship (Jacobi, 1991). Mentoring has been shown to be an effective method of integrating new employees in the business world as well as useful in education (Beachboard et al., Budge, 2006; Howard & Smith-Goodwin, 2010; Rocconi, 2011; Rodger & Tremblay, 2003). Tinto’s (1975) work on social and academic integration served as the foundation in the creation of a mentoring curriculum that provided opportunities for students to experience both social and academic interaction with peers. Astin’s (1984) theory of involvement aided in the design of the mentoring curriculum by ensuring that activities students engaged in provided both physical and psychological involvement. This was accomplished through weekly tasks as well as periodic reflection papers to measure feelings and perceptions. Berger and Milem’s (1999) Causal Model of Student Persistence provided additional support through reinforcing the use of early student peer involvement and highlighting the importance of faculty and institution support in student persistence. Additionally, Berger and Milem’s (1999) suggestion that involvement early in a student’s college career could create greater persistence provided support for mentoring interventions to happen with first-year students.
**Conceptual Framework**

Due to the complexity of this study and no similar research found, a conceptual framework was created. The framework depicts the combination of three popular persistence theories incorporated into a specific mentoring curriculum (Astin, 1984; Berger & Milem, 1999; Tinto, 1975). Tinto’s (1975) work on social and academic integration suggests that students who become socially and academically involved in their college experience will have higher persistence in their educational pursuit than those that fail to integrate. Astin’s (1984) involvement theory suggests physical and psychological involvement correlates with persistence. Berger and Milem’s (1999) theory suggests early involvement behaviors and faculty and institutional support create greater persistence. Using these three theories as a guide for development, a specific mentoring curriculum was used to foster social and academic integration requiring the participants to become physically and psychologically involved in their educational experience. The mentoring relationship took place early in the students’ academic career and included faculty and institutional support. A weekly mentoring curriculum with specific activities created from the persistence theories was followed using second-year students as mentors paired with first-year students as mentees. As a practitioner and researcher, I conducted the process using action research. This allowed me to readily identify what was and was not working in the process and implement change. The majority of those receiving mentoring exhibited increased engagement and academic confidence while I gained knowledge to improve practice. The conceptual peer-to-peer mentoring model exhibited in figure 1 was investigated using action research.
Importance of the Study

There were numerous reasons why conducting this study was important. Ultimately, the overall goal was to gain a deeper understanding of business management students and increase retention and graduation rates. There is a lack of research pertaining to technical college students and no research was found regarding peer-to-peer mentoring. This action research study will reduce the existing gap. The study will provide greater understanding about the impact of a peer-to-peer mentoring program on student engagement with their technical college, student
confidence to succeed academically, and student satisfaction with their institution. Also, this research will add to the existing body of knowledge regarding mentoring and student persistence, which may help other colleges in increasing student persistence rates.

More specifically, this study sought to identify what technical college students consider as sources for social and academic integration. During the analysis of data, attempts were made to identify which components of the mentoring experience students attribute to becoming more involved socially. Did the presence of a peer mentor affect the student’s engagement: making friends, joining clubs, and participation in college events? Also, did specific components of the mentoring experience exhibit a positive influence on the student’s academic confidence? Lastly, did the presence of a peer mentor increase student satisfaction with their technical college experience?

Since this study used a three-cycle action research design, self-reflection as the researcher/facilitator was required (Zambo, 2011). This allowed for changes to be noted and implemented at the end of each cycle. As changes were implemented, identification of specific actions faculty and the institution could take in improving the student experience in the study surfaced. These actions generated findings that helped myself and institution to foster greater student social and academic integration. Common themes emerged that suggested specific actions instructors can take in acclimating new students into college as well as specific institutional actions that can be adopted as part of new student orientation and included in college retention strategies.

Other areas of importance for this study were the applicability to other technical college programs and institutions. The study has shown mentoring has a positive effect on students becoming engaged in their educational experience, increased confidence, and greater satisfaction.
with their institution. It could be easily replicated among other programs and colleges. The mentoring curriculum used was generic rather than program specific. The only logistical details to work out would be the selection of mentors from other programs since this study specifies a student completing their capstone class to serve as the mentor. Other programs could possibly choose mentors based on program specific requirements.

Lastly, this study provided a host of demographic information regarding the impact of peer-to-peer mentoring on race, age, and gender when participating in a mentoring relationship. Ultimately, this study provided for a deeper understanding of technical college students, potentially allowing for improvements in educational practice leading to greater student success.
CHAPTER 2

REVIEW OF LITERATURE

This study’s purpose was be to explore the impact of peer mentoring on students' engagement, academic confidence, and satisfaction with their technical college using action research. There are a multitude of reasons students fail to complete their educational goals despite having the best intentions when beginning. Common reasons found in the literature include difficulty managing school and personal responsibilities (Willging & Johnson, 2004), fear of failure and the inability to connect with faculty (Johnson, 1997), and struggles to manage or fulfill course requirements (Doherty, 2006). The presence of a peer mentor can address these as well as a host of other issues new students face when beginning their college careers.

Research suggests that a peer mentor can lead to improved relationships among class members, increased student accountability, and a feeling of shared educational support (Crisp, 2010; Kartje’s, 1996; Salinitri, 2005). In addition, having a peer mentor exhibited positive effects on student’s confidence regarding their ability to complete coursework and improved their class attendance (Eggen, Van der Werf, & Bosker, 2008; Zhao, & Kuh, 2004). A review of literature was conducted to provide a foundation for this study. Chapter 2 presents a review and synthesis of research literature regarding the following concepts: (a) technical education (b) technical colleges, including enrollee characteristics (c) mentoring and peer-to-peer mentoring (d) student socialization and persistence in college, and (e) theories and practices that impacted and provided support for the research.
Technical Education

Technical education in its current form today has been influenced by numerous factors. Major influences on the evolution of technical/vocational education include the industrial age and demand for skilled labor, federal, state and local government intervention, business leaders, four-year universities, and European models of vocational education (Gordon, 2008; Scott & Sarkees-Wircenski, 2008). The following portion of the literature review identifies milestones in the formation of technical/vocational education and pertinent legislation, past and present, governing technical/vocational education.

Technical or vocational education can be traced back to colonial times in the form of apprenticeships (Kuchinke, 2013; Schultz, 1987). Training typically occurred under the tutelage of a master craftsman teaching a specific trade or craft. While no formal curriculum or school structure existed, apprentices often received academic training when completing an apprenticeship because they typically lacked formal educational preparation (McCaslin & Parks, 2002).

According to Gordon (2008), apprenticeships flourished until the rise of the American Industrial Revolution. As automation and machinery began to replace manual labor, the need for specialized craftsmen diminished while the need for trained industrial personnel increased. To address these new needs, schools began to emerge to provide training for industry. By 1833, these early forms of vocational education schools numbered approximately one thousand and provided practical skills to meet the needs of the industry (Banks, 1998; Gordon, 2008). In addition to preparing students with occupational skills, students were also taught various topics including education, political and domestic economic theory, and morals (Scott & Sarkees-Wircenski, 2008).
In addition to America’s industrial needs shaping vocational education, the federal government became involved with the passage of legislation to promote occupational training. Commonly considered as the first federal legislation promoting vocational education, the Morrill Act of 1862 was signed into law by Abraham Lincoln. Also known as the Land Grant College Act, the act awarded each state federal land to be sold or leased for money to establish colleges for occupational training. These colleges combined liberal and academic studies with vocational training for the fields of agriculture and industry (Gordon, 2008). Land-grant colleges and universities provided higher education opportunities to a wide range of students and were essential in establishing vocational education acceptance in high schools and colleges across the country (Scott & Sarkees-Wircenski, 2008).

In 1868, the Hampton Agricultural and Industrial School, later called the Hampton Institute and now Hampton University was opened in Virginia. The institute was established as a traditional black university with the primary mission of providing education and vocational skills to freedmen (Scott & Sarkees-Wircenski, 2008). In 1878, the institute began to provide training to Native Americans in an effort to assimilate them into society (Lindsey, 1995). In addition to providing vocational education, the institute also provided academic training relevant to the vocational subject taught. The institute is considered to be the first private trade school in the country (Scott & Sarkees-Wircenski, 2008).

Early vocational education in the US was heavily influenced by European models of training (Gordon, 2008). Notable milestones include the introduction of manual training, currently known as technical education, models in 1876. These models focused on manual trades, arts, and crafts. Borrowing from the Russian system of using the laboratory method of instruction, the first manual training high school was established in 1880 in St. Louis, Missouri.
to train students in the use of tools for mechanical arts. Training included demonstration of skills coupled with graded lessons. The first publicly funded high school offering manual training opened four years later in Baltimore, Maryland (Scott & Sarkees-Wircenski, 2008).

The Hatch Act of 1887 was the first federal act to provide direct funding for vocational education. Recognizing the importance of agriculture to the US, the federal government provided funding for states to establish experiment stations. Schools conducted agricultural research and provided findings to citizens about the application of agricultural science (Scott & Sarkees-Wircenski, 2008).

While government intervention played a pivotal role in the creation of vocational education, educators and private sector leaders also contributed to the rise of two-year colleges which began in earnest in the early 1900s (Gordon, 2008). Concerned about a shortage of skilled workers to fill demand in industry and agriculture, business leaders, educational reformers, and government workers began to form coalitions to press the federal government to work with states in the establishing a federal-state partnership. Coalition members sought the implementation of practical training be added to school curriculum as a way to prepare students for jobs in trades, agriculture, commerce, and home economics (Scott & Sarkees-Wircenski, 2008).

According to Ratcliff (1994), four-year universities played a significant role in the development of community and vocational colleges. Initially known as junior colleges, these institutions were established to cater to nontraditional and part-time students. In 1893, J. M. Carroll, president of Baylor University, recognized that attending a four-year university posed difficulties on many rural students, both financially and logistically. He is considered the first to propose the establishment of a two-year college where students could complete the first two-years of undergraduate coursework before transferring to a four-year university to finish their
baccalaureate degree. Due to a large number of smaller four-year institutions in Texas, Carroll proposed many to reduce their curriculum to two years of study and send graduates to Baylor for completion (Ratcliff, 1994).

Additionally, in 1902, recognizing that advanced education and training was unavailable to persons not living near a major university, William Rainey Harper called for the establishment of a terminal two-year college program within American high schools (Bogue, 1948). By extending their curriculums to include the first two years of college, high schools could provide additional education and training to those wanting to attend college, but could not do so due to location or finances. The term junior college was coined to describe the additional coursework and Harper has been attributed as a leader in the establishment of community colleges (Ratcliff, 1994).

By the early 1900s, changes began to take place in traditional high schools. Previously, high school was considered to be for those seeking higher education in a professional field. As public opinion of high school changed, enrollment increased. Unfortunately, the majority of high schools only provided students with academic training. This led to concern from parents who feared students would not have skills for the job market in the event they did not attend a university (Scott & Sarkees-Wircenski, 2008).

It was during this time that America was becoming the industrial leader of the world. As demand for goods increased, business leaders began to express concerns about the availability of skilled workers. Business leaders and influential leaders began a vocational education movement (Bogue, 1948). In an effort to address business and industry concerns, Governor Douglas of Massachusetts formed a commission in 1906 to study these concerns. Findings from the Douglas Commission Report suggested that the lack of vocational training for workers
increased the cost of production and verified there was indeed a shortage of skilled workers to satisfy America’s industrial needs. The report attracted national attention to the urgent need for vocational education and a movement began to include vocational education at secondary schools. Eleven years later, Congress acted with the passage of the Smith-Hughes Vocational Education Act of 1917. The Douglas Commission report was considered instrumental in bringing attention to the lack of vocational education and laid the groundwork for Smith-Hughes (Scott & Sarkees-Wircenski, 2008).

Prior to Smith-Hughes, in 1914, Congress authorized the Smith-Lever Act also known as the Agriculture Extension Act. Focusing on agriculture and home economics, the act provided a cooperative extension work program to individuals who were not enrolled in college. Mainly designed to provide training to American farmers and homemakers, training was conducted through demonstrations. Major significance of the act was that it introduced shared financial responsibility between the states and the federal government for vocational education. The act required states to contribute 50% of the costs for programs with the federal government assuming the remaining 50% (Scott & Sarkees-Wircenski, 2008).

In 1914, President Woodrow Wilson created the Commission on National Aid to Vocational Education by appointing a nine-member commission to examine federal aid for vocational education. The commission was tasked to study the need for vocational education, the need for federal grants, types of vocational education to provide grant funding for, the extent and requirements for aid, and a proposal of legislation. Working with the American Federation of Labor, the National Association of Manufactures, the National Education Association, and the Chamber of Commerce, the commission created legislation that would become the Smith-Hughes Act of 1917 (Scott & Sarkees-Wircenski, 2008).
**Technical Colleges**

The Smith-Hughes National Vocational Education Act of 1917 became the first major piece of federal legislation focusing on vocational (technical) education. The act created state boards of governance that formally divided academic and vocational education, a division still prominent in today’s high school educational structure (Kuchinke, 2013). The primary mission of the act was to appropriate federal monies for vocational education, establish a Federal Board for Vocational Education, and promote agricultural education, home economics education, and industrial education. In order to receive federal funding, state boards were required to submit annual reports to the Federal Board for Vocational Education detailing training offered, courses, equipment, instructor qualifications, and allocation of funds (Kuchinke, 2013). The act, co-sponsored by Senator Hoke Smith, future governor of Georgia, was the beginning of formal vocational education in Georgia. According to Scott and Sarkees-Wircenski (2008), “the Smith-Hughes Act of 1917 started the federal-state-local agency partnerships for establishing and operating vocational education programs in public institutions of less than baccalaureate level” (pp 222-23).

From 1917 until 1940, numerous acts were passed in Congress regarding vocational education. The Smith-Sears Act of 1918 appropriated money for returning disabled World War I veterans. This became the first federal Vocational Rehabilitation Act passed in the US. In 1920, the Smith-Fess Act provided federal funding for vocational education to those disabled working in industry. In 1940, Vocational Education for National Defense began with passage of ten legislative acts providing vocational education for the war effort. Training in production of armaments and nursing were the primary purpose (Scott & Sarkees-Wircenski, 2008).
The Servicemen’s Readjustment Act of 1944 provided numerous benefits to returning veterans including: unemployment, low interest loans, and financial aid for education. Also known as the GI Bill, the act contributed to growth in vocational and business schools as millions of returning servicemen sought skills to reenter the workforce (Thelin, 2004).

After the successful launch of the Russian satellite, Sputnik I in 1958, concerns grew about a shortage of skilled workers in the space program. Congress responded with passage of the National Defense Education Act of 1958. The primary goal of the act was to produce skilled technicians with effective math and science skills to aid engineers and scientists. Highlights of the act included funding for vocational training at the postsecondary level where previous legislation provided vocational funding at the secondary level. Title VIII of the act provided funding for postsecondary schools in each state and establishment of area schools to provide vocational training to those inadequately served. The act is credited with creating public interest in vocational education and introducing the concept of “all students going to college” (Scott & Sarkees-Wircenski, 2008).

During the early 1960s, America began to experience dramatic change as youth unemployment increased due to a lack of skills to meet industry demands. Those graduating high school lacked avenues for training while industry expressed concerns about skilled labor shortages. In 1961, President Kennedy called for a review of vocational education legislation in force and for Congress to create legislation reflecting a modernization of vocational education. At the height of the Cold War, the shortage of skilled technicians and workers created a national security issue. In response, Congress passed the Vocational Act of 1963 (Scott & Sarkees-Wircenski, 2008).
The Vocational Act of 1963, also known as the Perkins-Moore Bill, attempted to redirect vocational education. The purpose of the act was to provide federal grants to states the ability to maintain, extend, improve existing programs of vocational education, and develop new programs for vocational education (Scott & Sarkees-Wircenski, 2008). Major provisions of the act included access to vocational education for high school students, citizens of communities regardless of age, and those seeking career changes and retraining. Also, specific funding was included for persons with academic, socioeconomic, or handicaps that prevented them from completing regular vocational education (Scott & Sarkees-Wircenski, 2008). Amendments to the Vocational Education Act were signed into law in 1968, 1972, and 1976 to include vocational education at a postsecondary level, programs for those deemed disadvantaged, and improvement of student reading, writing and math skills, respectively (Friedel, 2011).

The Carl D. Perkins Vocational Education Act of 1984 was passed with the intent to not only address economic needs, but to also provide support for those with special needs. The Perkins Act replaced the Vocational Education Act and subsequent amendments (Gordon, 2008). The fundamental purpose of the act was to expand, improve, modernize, and develop quality vocational education programs designed to meet the needs of the nation's existing and future workforce. Specifically, provisions in the legislation addressed the development of employable and marketable skills with the ultimate goal of improving employee productivity and promoting economic growth (Gordon, 2008).

The Perkins Act introduced a formula to allocate federal funding to state secondary and post-secondary schools. Funds were appropriated based on the size of segmented age groups of each state and income per-capita. Typically, states with lower incomes per-capita and larger youth and young adult populations received a greater proportion of funding. Additionally, states
reserved the right to allocate funding among secondary schools and technical colleges. Eligibility required states to submit specific reports annually outlining programs and performance (Friedel, 2011). Funding was provided to assist states in modernize, expand, and develop new vocational education programs. Other major provisions of the act were promotion of cooperation between public agencies and the private sector to address the quality of vocational education programs, improvement in academic foundations for vocational education students, aid in implementing new technologies, and assist economically depressed areas of states by increasing the skills of those citizens (Scott & Sarkees-Wircenski, 2008).

In 1998, the Perkins Act was reauthorized with emphasis on promoting vocational and technical education in both secondary as well as post-secondary schools. National concerns that high school students lacked skills to compete in the global marketplace prompted Congress to act (Scott & Sarkees-Wircenski, 2008). The following five skill were identified to be of critical importance; basic and advanced academic skills, computer and technical skills, communication, problem-solving and teamwork, and acquisition of knowledge and skill throughout a lifetime (Scott & Sarkees-Wircenski, 2008). The legislation also allowed states greater flexibility is spending funds and greater accountability in student achievement (Gordon, 2008).

In 2006, the law was reauthorized under the name The Carl D. Perkins Career and Technical Education Improvement Act of 2006. Major changes to the act included the adoption of the term “career and technical education” as a replacement for “vocational” education, holding administrative costs of the program to 5% of fund allocations, and creation of programs of study to enhance academic and technical links between career and technical education with secondary and post-secondary schools (Friedel, 2011). Also, an additional state formula grant program was authorized under Title II of the act, Tech Prep. The primary goal of Tech Prep is to coordinate
course sequences in career and technical education between secondary and post-secondary schools thus enabling students to organize their studies around a career objective. The formula allows two years of secondary vocational education to be followed by two years of post-secondary education, commonly described as a 2+2 model. Currently, reauthorization of the act is pending but the 2006 version is still being applied today (Dortch, 2012).

Today, Career and Technical Education’s (CTE) mission is to provide educational leadership in developing a competitive workforce (ACTE, 2014). CTE programs in secondary schools prepare youth for future careers with many transitioning into post-secondary technical education. CTE provides a combination of informal training, on-the-job training, and formal education in high schools, community colleges, and four-year universities (Hou, 2010). Unfortunately, technical education continually fights the stereotypical “trade school” reputation while community colleges and universities are purported to produce professional scholars. These viewpoints originated when high school educators and administrators deemed vocational education as the only viable option for students who could not perform well academically and needed to be trained with a marketable skillset to become employable (Kao & Thompson, 2003). According to Friedel (2011), it wasn’t until the last decade that a major shift took place as the once labeled “trade schools” became known as “career and technical colleges” with the 2006 reauthorization of the Perkins Act. Now, even though American high school students are placed in career pathways that are either college-bound or career-tech specific, they are all taught a balance of academic skills and broad-based universal skills that are necessary in the current job market (Gordon, 2008; Office of Higher Education, 2014).
Technical College System of Georgia.

The first vocational school in Georgia was established in Clarkesville, presently North Georgia Technical College, and opened in 1944. The technical colleges of Georgia experienced steady growth between 1944 and 2006 as the number of institutions grew from two to thirty-four (Koon, 2014). Colleges were located throughout the state to provide workforce training. Colleges were built in various Georgia counties to provide service and develop programs specific to those counties’ economic needs. Governance of each school was transferred to the state in 1986 with the creation of the Department of Technical and Adult Education (DTAE). In 2007, administration of the state’s technical colleges was assumed by the newly created Technical College System of Georgia (Koon, 2014).

The current mission statement for the Technical College System of Georgia (TCSG) is to provide technical, academic and adult education and training focused on building a well-educated, globally competitive workforce for Georgia (Technical College System of Georgia webpage, 2014). There are currently 23 technical colleges located throughout Georgia which recorded 32,000 graduates of degree, diploma, and certificate programs in 2011. Technical colleges in the Technical College System of Georgia are two-year institutions granting Associate of Applied Science degrees, diplomas, and certificates in Business, Computer Technology, Health Care, Personal Services, Public Safety, and Technical and Industrial programs.

The technical college where this study was conducted was opened in 1963. As of January 2014, the college employed 116 full-time faculty, 206 adjunct faculty, and 207 administrative and staff personnel. The enrollment at the college in AY2013 was 7,758. Business Management, an associate degree program and area of interest for this research study, accounted for 8% (621 students) of this enrollment (TCSG, 2014d).
Enrollment in two-year colleges has grown significantly over the last 40 years. In 1970, just 36% of students in higher education were enrolled in a two-year institution. By 2012, the number choosing a two-year institution for higher education was 53% (NCES, 2012b). Chen and Carroll (2005) found that students who come from less educated families or are first-generation students will typically begin their higher education at a two-year institution. Additionally, students coming from lower income households and minorities are statistically more likely to begin higher education at a two-year institution; these include African American, Hispanic, Alaska Native, and American Indian. Minorities were also more likely to enroll in a public two-year institution rather than a private university, and many of these students worked while attending college (NCES, 2012c).

Nationally, statistics regarding race for those in higher education show that approximately 41% of whites and Asians chose a two-year rather than a four-year college. In comparison, African Americans and Hispanics chose a two-year college at 51% and 57%, respectively (NCES, 2012c). The racial makeup of the student body at two-year institutions revealed that 54% of the populations were white, 14% African American, 12% Hispanic, and 20% Asian, mixed-race, and other (NCES, 2012c). Awards conferred, certificates and associate degrees, show that 63% were received by whites, 14% by African Americans, and 15% by Hispanics (NCES, 2012d).

According to Schneider and Yin (2011), there are numerous reasons students choose to pursue higher education in a two-year institution with many choosing a community college as pathways to complete a four-year baccalaureate program. Other common reasons are the lower barriers for entry. These include lower entrance test scores, reduced costs, no formal recommendation process, and little to no evaluation of high school performance (NCES, 2012e,
More specifically, those choosing technical education oftentimes are seeking a skill to provide gainful employment or change careers (Hoover, 2011). Additional reasons, specific to technical education, include flexibility of course offerings to accommodate those with full-time employment and the availability of the HOPE Grant and HOPE Scholarship, essentially covering the expense of their education (Koon, 2014).

Unfortunately, the professional literature provides limited information on characteristics typically associated with individuals choosing technical college education. In an attempt to validate the use of community college literature in support of this study, an examination of data of community college students was compared to data of the technical college students to be used for this study. Many similarities were discovered (NCES, 2012a; TCSG, 2014a). These include similar economic backgrounds, level of academic preparedness, social support systems, and probability of being a first-generation college student, common characteristics of a two-year or less college student identified in the literature (Crisp, 2010; Schmid & Abell, 2003; Wilson, 2004).

The demographics of students enrolled in the technical college chosen as the site for this study shared similar demographics when compared with national averages for two-year institutions. The racial breakdown of the college consisted of 51% Caucasian, 42% African American, 3% Hispanic, and 4% other (TCSG, 2014a). The gender ratio of students at the college was 34.5% male and 65.5% female, roughly a 10% difference from the national average of 44% to 56% male-to-female ratio (TCSG, 2014a; NCES, 2012g). In comparing the age of students at the college, 52% were under the age of 25 compared to 59% nationally. Students over the age of 40 were 17% for the college while 10% nationally (TCSG, 2014a; NCES, 2012h).
The percentage of students receiving some form of federal financial aid at this college for FY12-13 was reported as 81% (NCES, 2012). This includes the Pell Grant, WIA (Workforce Investment Act), and VA (Veterans Affairs) benefits. The national averages for federal aid at public two-year and four-year college students were 63% and 68%, respectively (NCES, 2012). With most financial aid awards being determined by income or parent’s income, it is reasonable to assume a large majority of the college’s student population was of lower SES. The large number of students receiving aid at the college also support research suggesting that those attending a two-year institution tend to come from a lower socioeconomic status when compared to traditional four-year students and many come from single-parent homes receiving state and federal aid (Chen & Carroll, 2005; Collier & Fellows, 2008; TCSG, 2014b; Tinto, 2004).

Mentoring

Mentoring dates back to the ancient times of Greek Mythology. Legend states that Mentor gained notoriety for being the teacher and philosopher of Odysseus’ son. Mentor, according to legend, provided guidance, education, and encouragement to Telemachus (Odell, 1990). In modern times, Jacobi (1991) described mentoring as helping relationships usually focused on achievement while Kartje (1996) described mentoring as an investment by a mentor who seeks to build mentee confidence, skill, and knowledge. In education, Cohen and Galbraith (1995) describe mentoring as acting as a role model by sharing oneself, motivating and encouraging the mentee, and maintaining a positive belief in the mentee’s ability.

There is much disagreement in the literature regarding mentoring and its definition. In fact, the literature contains over thirty variations of the definition of mentoring (Nora & Crisp, 2008). Other common areas of disagreement include defining the role of the mentor, the length of the mentoring relationship, the intimacy of the relationship, the importance of gender and race
of mentoring pairing, and the motivations of mentors (Jacobi, 1991). Additionally, researchers have stressed the need for more stringent research and consistency with mentoring programs (Budge, 2006; Crisp, 2010; Rodger & Tremblay, 2003).

Mentoring is typically associated with the transitioning of new employees in the business world by pairing them with experienced professionals who will help them learn and move up within an organization. In education, the same principle is true, but it is typically the pairing of a faculty member with an undergraduate student, and little research is available concerning peer to peer mentoring (Jacobi, 1991). For the purpose of this study, mentoring was defined as a helping relationship fostering student socialization and academic integration in which an experienced student nearing completion serves as a role model helping the protégé to succeed by providing encouragement, insight, and feedback (Cohen & Galbraith, 1995; Nora & Crisp, 2008).

Mentoring in Higher Education

Numerous studies have been performed that have shown positive benefits of implementing a mentoring program to address the challenges faced by first-year university students (Campbell & Campbell, 2007; Collier & Fellows, 2008; Hu & Ma, 2010; Nora & Crisp, 2008; Stromei, 2000). While the studies varied to some degree on the specific treatment applied, mentoring generally focused on the academic and social integration aspects of first-year students; areas identified as major causes of student departure (Astin, 1993; Berger & Milem, 1999; Spady, 1970; Tinto, 1975, 1993; Voorhees, 1987). The use of mentoring in the literature suggests mentoring improves first-year student acclimation into college life (Campbell & Campbell, 2007; Crisp, 2010; Holland, Major, & Orvis, 2012; Howard & Smith-Goodwin, 2010; Kartje, 1996; Salinitri, 2005; Shultz, 2001).
Mentoring programs have been shown to encourage or facilitate an increase in students’ self-confidence, leading to greater skill achievement and an overall higher level of academic success (Rodger & Tremblay, 2003). Academic success is correlated with student persistence and program completion (Tinto, 1975). According to Collier and Fellows (2008), those entering a two-year college when compared to a four-year college statically have lower self-confidence in their ability to succeed academically. Mentoring is an effective method to allow students to share their concerns and struggles with another student in a similar situation thus increasing self-confidence (Collier & Fellows, 2008). Chopin et al. (2012) suggest that the presence of a peer mentor resulted in increased mentee self-efficacy positively correlating with academic success.

The literature regarding mentoring in higher education provides researchers common themes investigating first-year freshman student success. According to Crisp (2010), Good et al. (2000), Jacobi (1991), Nora and Crisp (2008), and Stromei (2000), mentoring should provide academic and social support, goal setting and career paths, and institutional commitment. Unfortunately, in an exhaustive review of existing mentoring literature, Nora and Crisp (2008) found that most mentoring programs established in higher education are based off a “feel good” approach rather than based on firm theoretical grounding. The lack of a definitive guide for creating and implementing a mentoring program with theoretical grounding provided inspiration for the creation of my conceptual peer-to-peer mentoring model.

In addition, Jacobi (1991) and Nora and Crisp (2008) note that some research appears to have considerable disagreement about the characteristics of mentoring in higher education. Several areas of concern include the duration of the mentoring relationship, the level of intensity or intimacy, assignment of a mentor or free choice mentoring, gender and ethnicity matching, and motivations of individuals to serve as mentors. Jacobi (1991) suggests that researchers
involved in future mentoring should focus on “involvement in learning, academic and social integration, social support, and developmental support.” This particular study addressed each of Jacobi’s (1991) suggestions using a weekly mentor/mentee checklist. Various activities were required during the course of the study addressing involvement, academic and social integration, and social and development support.

**Peer-to-Peer Mentoring**

Peer-to-peer mentoring can be defined as a relationship in which an experienced and skilled individual imparts knowledge and skills to another by taking an active interest in the mentee’s success and serving as a role model (Campbell & Campbell, 2007; Kartje, 1996; Nora & Crisp, 2008). Peer mentoring has become an area of interest for researchers exploring first-year student success (Beachboard et al., 2011; Budge, 2006; Howard & Smith-Goodwin, 2010; Rocconi, 2011; Rodger & Tremblay, 2003). In higher education, much of the literature describes the term “mentor” as a faculty member interacting with an adult learner (Charman & Camille, 2013; Jacobi, 1991; Salinitri, 2005). For this study, a mentor was defined as a management student enrolled in their capstone course (MGMT 2215). Students could only enroll in their capstone course during the last or next to last semester before completion of their business management degree or diploma. Completion of English 1101 with a “C” or better was required.

In an attempt to define mentoring and its implications on education, Kartje (1996) conducted a thorough review of the literature and identified three major activities that comprise a mentoring relationship. First, a mentor provides academic training to the protégé imparting knowledge or skills. Second, mentors teach ethics, values, and protocols specific to their discipline by acting as a role model. Third, mentors provide psychological support and build protégé self-esteem and confidence. Kartje (1996) also summarized five common features found
in the literature regarding mentoring. They include the following: mentoring is a helping relationship focused on achievement, mentoring includes the three major activities previously discussed, both the mentor and protégé benefit in a mentoring relationship, mentoring relationships are personal and involve sharing of information that is not public knowledge, and mentors have great influence on the protégé.

The use of mentoring may be beneficial for minority students, those who research suggests are most likely to leave before completion of their program (Holland et al., 2012; NCES, 2012). In an effort to identify the benefits mentoring exhibited on students of color, Shultz (2001) implemented the Adventor Program to measure mentoring perceptions of African-American and Mexican-American students. While Shultz did not seek to prove or disprove anything, the study provided researchers with suggestions for future research. At the conclusion of the year long program, mentees reported an 88% satisfaction rate with their mentoring experience, and 67% of the participants returned for their second year. Student grade point averages were shown to be 2.13% higher than non-participants.

Roger and Tremblay’s (2003) research study, *The Effects of a Peer Mentoring Program on Academic Success among First Year University Students*, created a conceptual framework to test the hypothesis’ that peer mentoring would positively affect students’ academic achievement and increase retention rates for those mentored from freshman to sophomore years. The researchers combined three theoretical theories explaining the positive effects of peer mentoring. These included social, cognitive, and motivation perspectives. The social perspective proposed that peers influenced both feelings of belonging and the desire to persist (Bank, Slavings, & Biddle, 1990). The cognitive perspective suggested that peer mentoring led to improved study habits, study skills, and reduced anxiety (Fantuzzo, Riggio, Connelly & Dimeff, 1989; Hembree,
Motivational perspectives proposed that mentoring increased student self-efficacy and encouraged help-seeking behaviors (Hayes, 1998; Karabenick & Knapp, 1999). Findings from the study suggest peer mentoring did indeed reduce freshman anxiety yet no positive impact on retention or academic achievement were observed. While the researchers noted frequent contact and interaction between mentors and faculty, contact between mentors and mentees was random and without structure raising questions about implications on results (Roger & Tremblay, 2003).

Salinitri (2005) conducted a study to examine the effects mentoring exhibited on first-year, low-achieving students and program satisfaction. Areas of interest included those participating in a mentoring program and those who were not, student grade point averages, retention rates, and number of courses enrolled in. Using a two-way MANCOVA analysis, findings revealed significant differences in grade point averages for mentored students when compared to the control group. Mentored students also exhibited a significant difference in the number of failed courses and an increase in student retention. Mentees reported a positive perception of the mentoring experience, and 80% reported effectiveness in skill development and academic strategies.

Budge’s (2006) analysis of peer mentoring literature, Peer Mentoring in Post-secondary Education: Implications for Research and Practice, examined the details of different types of mentoring programs and evaluated their effectiveness. Problems with existing research were identified and suggestions to overcome limitations were provided. Fifteen years later, Budge (2006) echoed Jacobi’s (1991) suggestion for more stringent research and consistency in mentoring literature. Traditional mentoring literature has typically excluded individuals of less represented races, ethnicities, sexual identities, and socioeconomic status, and minority populations, groups who would likely benefit from mentoring. Common themes in the literature
revealed mentoring was seen as necessary for students and employees to excel in their environment. Also, mentoring has grown in education as a result of successes noted in the business world and can be an effective tool in addressing poor retention rates. Suggestions to improve consistency in the literature included providing training and orientation to mentors on providing guidance and support to their mentees and use of progress reports to better understand mentor/mentee interaction. Budge (2006) concludes that while the literature shows mentoring is an excellent source of guidance, there is still a long way to go before the value of mentoring is understood.

Campbell and Campbell’s (2007) research study, Outcomes of Mentoring At-risk College Students: Gender and Ethnic Matching Effects, tested theories in mentoring literature that suggest gender and ethnic matching between mentor and student would increase performance and retention. Campbell and Campbell (2007) hypothesized that increases in both performance and retention would result from this matching. In addition to testing theories that suggest a benefit of matching, theories that suggest there were no benefits of gender or ethnic pairing were also tested by having a control group paired with gender and ethnic differences. Research used to support their hypothesis included findings by Fitt and Newton (1981) that suggest similar backgrounds and interests of the mentor and mentee yield more positive results when compared to random pairing. Also, findings by Frierson, Hargrove, and Lewis (1994) and Walker and Taub (2001) found mentoring to be most effective when the mentor and mentee belong to the same minority ethnic group. Theories tested that suggested no benefit of pairing based on gender and ethnicity included the researchers’ previous work (Campbell & Campbell, 1997) as well as research by Noe (1988) and Hollingsworth and Fassinger (2002). Findings revealed mentored students had higher grade point averages, completed more course units, and had a
higher retention rate. Participants in mentoring programs also reported being more comfortable in their academic experience, increased motivation, and higher career aspirations as a result of mentoring. While many positive benefits from mentoring were suggested from participation in a mentoring program, pairing based on gender and ethnicity revealed no significant differences when compared to students paired using different genders and ethnicity (Campbell & Campbell, 2007).

Nora and Crisp’s (2008) study, *Mentoring Students: Conceptualizing and Validating the Multi-dimensions of a Support System* was conducted to begin theoretically framing parameters and components in a mentoring experience using a conceptual framework. The researchers expressed concern about the lack of social and academic support available to students and felt strongly about the benefits of mentoring. To address these issues, the researchers used “theoretical perspectives from educational, psychological, and business theories” to create four domains or latent constructs (Nora & Crisp, 2008, p. 342). These included: providing psychological support, creating goals and paths to achieve goals, support academically, and serving as a role model (Cohen & Galbraith, 1995; Haring-Hidore, 1987; Miller, Salmela, & Kerr, 2002; Roberts, 2000). To test these variables, the researchers used various instruments to measure each of the constructs with the sample size consisting of 200 students enrolled in a two-year institution. Findings suggested that students considered emotional and psychological support, assistance with goals and paths to achieve goals, and academic support as their primary mentoring experiences. Additional suggestions included using mentoring experiences to help students adjust to college, socially and academically (Nora & Crisp, 2008).

To better understand the impact of mentoring on community college students, Crisp (2010) examined the weaknesses in the professional literature by measuring the comprehensive
and theoretical-based mentoring experiences on student outcomes. Using 320 randomly selected community college students, Crisp examined whether student outcomes as a result of mentoring mimic results found in a traditional four-year university. Findings from the study suggested females benefitted more from mentoring both academically and socially. Part-time students reported higher levels of mentoring when compared to full-time students (12 hours or more). Full-time students were more socially integrated than part-time, while part-time students exhibited more institutional commitment. Those enrolled full-time were found to be more likely to persist and enroll for the following semester.

In a study conducted by Howard and Smith-Goodwin (2010), mentoring was used in a cohort model to address freshman student retention, socialization, and satisfaction. Instead of the traditional one-on-one mentoring model, students were assigned in groups of 8-12 students. Using qualitative data and surveys, participants reported tremendous benefits obtained from the mentoring experience. The mentoring program experienced 3% growth while overall college enrollment dropped. Students surveyed noted a 90% satisfaction and connectedness to their college. Additionally, 74% felt the program had helped them academically, and 55% felt the program had helped them with life challenges outside of their program.

Holland, et al. (2012) examined mentoring as a tool to increase completion rates for minority students in STEM (science, technology, engineering, and mathematics) majors. The dependent variables of interest in the study were student satisfaction with their major, student commitment to their major, student involvement with their major, and student willingness to mentor others. Results were measured using satisfaction and commitment questionnaires and yielded the following: peer mentoring was found to be positively related to satisfaction, increased student commitment to their major, increased student involvement with their major,
and increased student willingness to mentor others. Capitalization, coping where an individual seeks out professional growth and development for improvement, was positively related to peer mentoring.

In an effort to understand mentoring’s effect on minority mentors, Good et al. (2000) measured academic and interpersonal growth for those serving as a mentor. Findings from the research suggest that those serving as mentors provided numerous benefits. These include approximately 50% noting an improvement in their own study skills and 27% reporting growth in their critical thinking and problem solving abilities. Additionally, 90% of participants reported improvement in their personal skills which included their ability to communicate. Retention rates for mentors increased to 80% that participated in the study compared to a 35.6% national average for the field. Findings suggest that while mentoring benefits are traditionally viewed from a mentee perspective, serving as a mentor can potentially provide benefits and is useful in addressing retention rates for minority students (Good et al., 2000).

The following sections of the literature review, student socialization and student persistence were examined to provide a better understanding of how new students begin the socialization process in education and identify common themes in the literature that impact student persistence. Mentoring has been shown to positively affect both student socialization and persistence (Roger & Tremblay, 2003; Holland, et al., 2012).

**Student Socialization**

Student socialization can be described as the process by which students learn new skills, knowledge, and establish relationships with fellow students, faculty and the institution (Astin, 1984; Tinto, 1997). The extent to which a new student becomes involved in the social and academic environment of the university can be used to predict attrition (Tinto, 1975, 1993).
Astin (1993) suggests that one of the most important components for student success is socialization into college life which includes involvement with faculty, peers, and institutional functions. According to Tinto (1987), colleges should serve as social and intellectual communities by reaching out to students to build bonds fostering social and intellectual growth.

Fleming, Howard, Perkins, and Pesta (2005) suggest students who form relationships and receive support from peers experience personal growth and have a higher rate of program completion. Commonly used methods to foster socialization include mentor programs and participation in student clubs, both of which are shown to facilitate a student’s integration into college life (Crisp, 2010). Additionally, faculty and staff of the institution have also been shown to play a key role in student socialization into college life and producing positive effects on retention (Fleming et al., 2005). Socialization into college is suggested for increasing a student’s sense of belonging and desire to persist (Bank et al., 1990).

In contrast, Astin (1993) theorized that non-involvement with campus life has a powerful negative impact on student outcomes yet involvement with academics, faculty, and student peers are the most potent forms of positive involvement. Students who report higher levels of contact with peers and faculty also demonstrate higher levels of learning and persistence during their stay in college (Endo & Harpel, 1982). Building supportive peer groups helps students make the transition to college and integrates them into a community of peers.

Student socialization is influenced by the college environment. Involvement with the environment includes physical and psychological components (Astin, 1993; Fleming et al., 2005). The physical environment is comprised of buildings and locations, and the psychological environment is comprised of interactions and relationships with faculty, staff, and peers (Fleming et al., 2005). According to Astin (1993), the peer group is the most important environmental
influence on student success. Increases in personal and cognitive development have been attributed to peer involvement, both in and outside of the classroom (Kuh, 1995; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001).

Student socialization impacts completion rates of students attending college (Cohen & Galbraith, 1995). Currently, 19% of the students enrolled at the two-year college to be used in this study complete their programs of study (NCES, 2012). The literature appears in agreement on the importance of early social integration into college (Astin, 1984, 1993; Berger & Milem, 1999; Engstrom & Tinto, 2001; Fleming et al., 2005; Tinto, 1975, 1993). According to Strange and Banning (2001), the difficulty lies in gauging and measuring environmental factors to accomplish social integration.

The literature suggests that early socialization into college life can provide support for the students experiencing academic difficulty, unclear goals, and lack of commitment (Berger & Milem, 1999; Chen & Carroll, 2005; Crisp, 2010). Additionally, socialization is suggested to provide benefit to the approximately 49% of first-generation college students by alleviating some of the fear and apprehension common in beginning students (Adams & Corbett, 2010; Chen & Carroll, 2005; Collier & Fellows, 2008; Crisp, 2010; Jacobi, 1991).

Tinto (1997) proposed that meeting people and making friends when beginning college is a critical part of student life and “groups that formed within the classroom often extended beyond the classroom in informal meetings and study groups meeting both social and academic needs (p.7). Understanding how college works, expectations, and sharing concerns can increase student confidence, which can increase student success (Chopin et al., 2012). Additionally, socialization with faculty also plays a key role in student success. Frequent contact and support
from faculty can have a significant impact on a student’s learning and persistence (Endo & Harpel, 1982; Tinto, 1997).

**Student Persistence**

Student persistence is one of the most frequently researched topics in post-secondary education. There are numerous theories that have been developed over the last 40 years in an effort to better understand the phenomena of student dropout (Astin, 1993; Berger & Milem, 1999; Spady, 1970; Tinto, 1975; Vorhees, 1987). Early literature suggested that student failure to persist was a psychological issue, and that the individual lacked motivation, necessary skills, and ability to adjust to the rigors of college coursework. Institutions typically viewed dropout rates as student problems with little understanding of how the institutional interaction affected persistence (Tinto, 2006). Astin (1993) suggested that student involvement with their institution coupled with institutional efforts to integrate first-year students into college environments provided the needed academic development, personal development, and satisfaction for student persistence.

Researchers have found that individual attributes such as race, gender, academic ability, family background, and precollege experience play important roles in students’ ability to complete their educational goals (Crisp, 2010; Tinto, 1987; Wood, 2012). Completion rates show that 58% of students entering public or private four-year institutions earned their degree after six years (NCES, 2011). Private institutions reported a 69% completion rate for those entering a four-year college seeking a bachelor’s degree, while 53% of those entering public four-year institutions completed their degree after six years. High income students earned degrees at the same institutions at a higher rates than low income students. Completion rates for
low income students ($25,000 or less) when aggregated over a six-year period were 26% completing a bachelor’s, 14% an associate, and 10% a certificate (Tinto, 2004).

Completion rates for those attending a two-year institution are much lower than four-year institutions. The literature suggests that students with less academically prepared will choose a two-year or less post-secondary institution (Collier & Fellows, 2008). In addition, two-year college students also typically lack the support system of a traditional four-year student with many working while attending college (Chen & Carroll, 2005). Also, the literature suggests a higher percentage of two-year students are first-generation students and minorities, groups that are statistically at a higher risk of not graduating (Collier & Fellows, 2008; Schmid & Abell, 2003; Wilson, 2004). In 2009, the latest available data, total graduation rates were 31% after three years of enrollment (NCES, 2014). Nonprofit public institutions recorded a 20% graduation rate yet for-profit institutions recorded a 63% graduation rate. In comparison, the technical college to be used for this study had a 19% graduation rate in AY2010 (NCES, 2012).

**Persistence Models**

As I began reviewing the empirical research on persistence, results yielded a wealth of information pertaining to four-year university students, but offered a limited amount of research from community/technical colleges. The literature revealed numerous reoccurring themes regarding persistence. Examples included academic preparedness, individual commitment to goals, family background and socioeconomic status, self-efficacy or belief in one’s ability, involvement or engagement in one’s educational experience, and faculty and institutional support (Astin, 1984; Berger & Milem, 1999; Spady, 1970; Tinto, 1975, 2004; Voorhees, 1987). Unfortunately, the ideal model in addressing student persistence has not been constructed and researchers note that results vary on effectiveness of retention strategies while suggesting
additional research is needed (Astin, 1993; Berger & Milem, 1999; Jacobi, 1991; Crisp, 2010).
While the following models were not specifically used in the creation of my conceptual mentoring model, they did provide valuable information regarding student integration, or lack of, into college and additional information regarding persistence.

**Spady’s Model of College Student Dropout**

Attempts to understand student persistence began in earnest in the late 1960s. Spady (1970), designed one of the first conceptual models exploring college student attrition using Durkheim’s Model of Suicide as a framework. Durkheim’s model suggests that a person is more likely to commit suicide if they fail to integrate into society. Spady’s model theorizes that student attrition follows the same pattern as suicide, and individuals who fail to integrate into a college social system more frequently dropout.

Spady’s (1970) model also suggests that the institution plays a key role in the integration of a student into the social environment. His model theorizes that students who maintain satisfactory academic performance and establish friendships would typically persist at a higher rate when compared to those with lower academic performance and fewer friendships. Spady’s research was instrumental in changing perceptions that student failure was solely a result of student choices and suggested that institutions shared responsibility for the failure. Central to the model was student integration and the establishment of relationships and interaction between students and institution members.

Using validity tests, Spady’s (1970) model revealed limitations when comparing gender. Tests of the model showed variances in factors related to dropouts with men identifying grades as the most important factor followed by institutional commitment. Women identified institutional commitment as most important followed by grades. Additionally, women placed
greater emphasis on social relationships when compared to men. Other limitations to Spady’s model were the actual measuring of social integration and social experiences as well as the study being conducted at a prestigious four-year university (University of Chicago), thus limiting application in institutions with more diverse backgrounds.

**Voorhees Community College Persistence Model**

The first major model for community college persistence was created by Voorhees (1987) and analyzed how informal faculty contact with community college students affected persistence. Using Tinto’s (1975) model as a framework, Voorhees measured academic integration using informal faculty contact, student GPAs, and the number of weekly hours devoted to studying. To analyze social integration, Voorhees focused on extracurricular activities and out-of-class contact with peers.

Voorhees’ (1987) model yielded interesting findings. Voorhees concluded that faculty interactions, student grade point averages, and hours invested in studying significantly predicted student persistence. Other relevant findings were that women were more likely to persist. No significant differences were noted when comparing full time student status to part-time status nor did race or ethnicity appear to affect persistence.

Voorhees (1987) concluded that community college students have different needs when compared to traditional four-year students. He suggested that social interaction is less important to community college students. Community college students appeared to be more interested in activities that provided convenience and accommodated their lifestyle and diversity. These included course offerings, daycare services, flexible scheduling, and transportation assistance. Voorhees’ findings were later validated by research that illustrated that community college students typically enter college with a different set of assets and have more life challenges when
compared to a traditional four-year student (Chen & Carrol, 2005; Tinto, 2004, 2006).

**Bean and Eaton’s Psychological Model of College Student Retention**

Bean and Eaton’s (2000) longitudinal model of college student retention suggests that student departure is a behavior that is psychologically motivated. Four psychological theories were identified that pertain to social and academic integration into college. These theories include: student attitude-behavior, coping behavior, self-efficacy or their perception of their ability, and attribution.

The first theory, attitude-behavior, suggests that student attitudes entering an institution reflect the student intention and resulting behavior. These attitudes are formed from past experiences including prior and academic and social interactions. The second psychological theory, coping behavior, proposes that individuals will assess their given environment and adapt strategies accordingly. Coping behaviors allow a student to adapt to the school environment facilitating social and academic integration. The third theory, self-efficacy, is the student’s perception on their ability to accomplish certain tasks. Students who are confident in their ability, gain self-confidence leading to increased persistence and achievement. The final theory, attribution theory, deals with student’s locus of control. Locus of control is the extent in which a person believes they are in control of events that occur in life. Those with an internal locus of control believe they were the primary force governing their success or failure whereas those with an external locus of control view their successes of failures as events beyond their control (Bean & Eaton, 2000).

**Theories and Models Used to Construct a Conceptual Framework**

Knowing that I wanted to perform action research as a practitioner, I began to focus on components of the persistence literature that would enable me to provide interventions, a key
aspect of action research (Zambo, 2011). The particular areas of interest I decided to focus on were engagement or involvement in one’s educational experience, academic confidence, and satisfaction with one’s educational experience. The following portion of the literature review will examine the theory and models used in the creation of my conceptual framework.

Astin’s Theory of Involvement

Alexander Astin’s (1984) theory of involvement, the physical and psychological amount of energy a student invests in college, proposed that a student will essentially learn more and experience greater personal development than those who fail to become involved. Involvement included academic work, sports, extracurricular activities, and interaction with faculty, peers, and college personnel. As levels of involvement academically and socially increased, levels of a student’s satisfaction with their college and retention rates also increased. Findings suggest that faculty interaction with students was determined to play a significant role in the amount of effort a student put forth to integrate academically and socially; greater faculty interaction produced greater student integration. These interactions took place both inside and out of the classroom.

Astin’s (1984) theory assumes that student involvement is different for individual students, but the institution and faculty can influence levels of involvement. Student learning and development are by-products of quantity and quality of involvement a student experiences. The effectiveness of instituting greater student involvement is dependent on the capacity of the staff and faculty to facilitate this involvement. Also, ensuring that involvement is not merely physically “doing” but psychological involvement, and all activities should be evaluated to ensure they create student involvement, is a core tenant of the theory (Astin, 1984). Numerous researchers have used Astin’s (1984) theory of involvement in their own studies to measure the effects of student involvement with others as well as the institution (Campbell & Campbell,
While widely accepted as a viable theory, weaknesses noted are the investment of time and resources required by faculty and the institution to ensure that students are motivated to become involved both academically and socially. Faculty and the institution must identify motivators and ensure students are committed in both time and effort while they themselves must ensure that time, effort, and resources are allocated to be successful (Crisp, 2010).

Tinto’s Model of College Student Dropout

Vincent Tinto (1975, 1993) expanded on Spady’s (1970) work of student persistence. Considered one of the pioneers in the field of student persistence, Tinto, like Spady, focused on Durkheim’s theory of suicide in the creation of his own model to understand student persistence. In addition to social integration, Tinto added academic integration to his model. Tinto theorized that the social and academic experiences a student experienced determined the degree of integration into the college and would predict if a student would persist or dropout. The implications for institutions were to create greater academic engagement of students while also providing student social engagement among students. These experiences would satisfy the social and academic needs of students with increased persistence as a result.

Tinto’s (1975) model identified student background characteristics, individual attributes, and pre-college schooling experiences. Analysis of these components appeared to be a good predictor of students’ level of institutional commitment and commitment of goal completion. If students displayed high levels of institutional commitment and had high personal goals, they experienced greater levels of social and academic integration. With this integration, Tinto theorized they in turn would have higher persistence.
To better understand what constituted academic and social integration, Tinto (1975) provided examples of activities that would encourage integration. The relationship and contact with faculty as well as classroom engagement in academics directly affected academic integration into the institution. Social integration also included faculty contact outside of the classroom and forming friendships with peers. Most academic integration occurred inside the classroom while most social integration took place outside the classroom. While Tinto’s model has been widely accepted by the academic community, some feel the model is too complicated and find difficulty measuring academic and social integration (Tinto, 1993; Voorhees, 1987). Tinto (1993) himself recognized weaknesses in his original model in that it lacked detail about how behavior and perception of students change as they become more socially and academically integrated into college. He revised his original model and provided discussion to elaborate on experiences of integration in a college environment (Tinto, 1993).

**Berger and Milem’s Causal Model of Student Persistence**

Berger and Milem’s (1999) causal model of student persistence sought to expand on previous research conducted by Astin’s (1984) original theory of involvement and Tinto’s (1975, 1993) student departure theory. The researcher’s model sought to explain how beginning student behaviors and perceptions influence social and academic integration and the effect on persistence. Also, the research attempted to identify actual sources of social and academic integration for college students.

Berger and Milem’s (1999) model examined the following variables: individual background characteristics, the students’ commitment when beginning their education, how involved they were mid-way through their fall semester, their mid-fall perceptions of their education, their involvement mid-spring, their academic and social integration, and overall...
commitment. Behavioral and perception responses from instruments used in the study were into persistence measurements.

Female participants reported more positive effects regarding peer to peer relationships and institutional commitment than their male counterparts. The research also highlighted the importance of early behavioral involvement on social and academic integration. Students who noted involvement early during the fall semester appeared to have a positive spring involvement, which appeared to have a direct impact on the student’s social and academic integration, their institutional commitment, and desire to persist. Early peer involvement appeared to strengthen institutional perceptions and social support translating into increased persistence. The study also suggests that previous research underestimates the role involvement plays in student persistence. Students that did not become involved early were less likely to persist while early involvement with faculty and peers produced positive benefits for first-year students (Berger & Milem, 1999).

Components of the previously discussed persistence theory and models were all incorporated into this action research design study. This facilitated the need for the construction of a conceptual model (p.14). Tinto’s (1975) work on social and academic integration served as the foundation in the creation of a mentoring curriculum that provided opportunities for students to experience both social and academic interaction with peers. Astin’s (1984) theory of involvement aided in the design of the mentoring curriculum by ensuring that activities students engaged in provided both physical and psychological involvement. This was accomplished through weekly tasks as well as periodic reflection papers to measure feelings and perceptions. Berger and Milem’s (1999) causal model of student persistence provided additional support through reinforcing the use of student peer involvement and highlighting the importance of faculty and institution support in student persistence. Additionally, Berger and Milem’s (1999)
suggestion that involvement early in a student’s college career could create greater persistence—provided support for mentoring interventions to happen with first-year students.

The mentoring conceptual frameworks used as support for this study provided vital information in the research design. Nora and Crisp’s (2008) *Mentoring Students: Conceptualizing and Validating the Multi-dimensions of a Support System*, helped emphasize the need for clarity in conducting a mentoring experiment, and components of a well-designed mentoring program should be guided by previous research rather than researcher feelings or perceptions. Nora and Crisps (2008) research identifying latent variables of support helped guide the creation of my mentoring curriculum. Campbell and Campbell’s (2007) research study, *Outcomes of Mentoring At-risk College Students: Gender and Ethnic Matching Effects*, provided support by suggesting that mentoring programs should focus on the mentoring experience rather than ethnic and gender matching. Findings also suggest that mentoring can increase motivation and retention. Roger and Tremblay’s (2003) research study, *The Effects of a Peer Mentoring Program on Academic Success Among First Year University Students* provided support for my study by showing the positive effects on reducing anxiety of new students. Reducing stress can lead to greater self-efficacy and have a positive effect on retention (Rodger & Trembley, 2003). Their study also reaffirmed the need for a mentoring program to have structure to achieve effectiveness.

The relationship between mentoring and social, as well as academic, integration is grounded in the assumption that mentoring is a “helping” relationship (Jacobi, 1991). Mentoring has been shown to be an effective method of integrating new employees in the business world as well as useful in education (Beachboard et al., 2011; Budge, 2006; Howard & Smith-Goodwin, 2010; Rocconi, 2011; Rodger & Tremblay, 2003). By incorporating a specific mentoring
A curriculum that focuses on the social and academic components identified in previous research, perhaps new students will integrate into college life, thus leading to greater academic achievement as well as institutional commitment and satisfaction (Astin, 1993; Berger & Milem, 1999; Tinto, 1975, 2004). This led to the creation of the conceptual model illustrated on page 14.

Conclusion

The review of literature provided critical information for this action research study. While the literature contains a vast body of research regarding student persistence, little research exists regarding community college students or technical college students. The literature does provide a theoretical framework to address student persistence issues in technical education. I have made the assumption that community college and technical college students share many similarities.

The body of literature reviewed regarding mentoring contained numerous studies evaluating the effectiveness mentoring has on student persistence and academic and social integration. Due to little research discovered specific to community colleges or technical education, I also made the assumption that the needs of community college and traditional four-year university students are universal and can be met by fostering social and academic integration into an institution as well as providing faculty support.

Numerous researchers noted conflicting results from previous mentoring studies and recommended further research into mentoring’s effectiveness of student success. It is my hope that this action research study sufficiently answered the research questions and added to the existing body of knowledge regarding the interaction of mentoring and student persistence.
CHAPTER 3
METHODOLOGY: A CASE FOR PEER-TO-PEER MENTORING IN TECHNICAL EDUCATION

Understanding the motivation or lack thereof of students is crucial if the goal is to increase student self-efficacy and, ultimately, academic engagement (Handelsman, Briggs, Sullivan, & Trowler, 2005). This is truer than ever in higher education since coursework beyond the diploma granted at the end of post-secondary school is an important accomplishment in today's ever more competitive job market. Lanaan (2000) notes that technical college students are in school for a defined purpose: that is, to get a job in their chosen field. In today's world, successful completion of a certificate or degree program, depending on the profession, is often mandatory (Marcotte, Bailey, Borkoski & Kienzl, 2005). This is also true for students enrolled in technical college, but these students often have many factors working against them with regard to successful degree completion. According to Matus-Grossman and Gooden (2002), many technical college students attend school on a part-time basis due to providing support for their families or paying for their education. Additionally, previous negative school experiences have prevented them from seeking four year undergraduate degree. This research provided a deeper understanding of technical college students and potentially help them get to where they want to be: into the workplace with a useful credential.

The theoretical framework for this study is based on research conducted by Tinto (1975), Astin (1993), and Berger and Milem (1999). Tinto (1975) sought to explain the relationship between student persistence and social and academic integration into college and found that
students are more persistent when they experience higher levels of academic and social integration in school. Astin (1993) proposed that the level of involvement a student experiences in social and academic integration positively correlates with student satisfaction and persistence, furthering the work done by Tinto (1975). Berger and Milem (1999) sought to identify how behaviors and perceptions influence student academic and social integration. Hypothetically, implementation of a mentoring program focusing on academics and social interaction implemented early in a student’s technical college career will have a positive impact on student persistence and achievement.

Mentoring, writes Jacobi (1991) can have a positive impact on students' academic engagement; hence, it can have a positive effect on their success rate in school. Self-efficacy or confidence will then potentially increase since successful completion of tasks is linked to higher self-efficacy and confidence (Multon, Brown, & Lent, 1991). With positive experiences under their belts, students are likely to be satisfied with their community college experience as a whole (Suhre, Jansen, & Harskamp, 2007). To that end, this study explored the potential of peer mentoring relationships in increasing student engagement, self-efficacy or confidence, and satisfaction with their overall educational experience.

**Purpose of the Study**

The purpose of this study was to use action research to explore the impact of peer mentoring on students' engagement, academic confidence, and satisfaction with their technical college experience. The literature reveals that students who become actively engaged in their college experience (Astin, 1984), integrate into the academic environment of the institution (Tinto, 1975), and experience institutional satisfaction (Berger & Milem, 1999), persist at higher rates. Too often, students begin the semester with the best of intentions but are derailed by any
one of many factors. These might include the inability to fulfill or manage course requirements (Willging & Johnson, 2004), fear of failure or disconnect with the school experience or faculty (Johnson, 1997), scheduling issues (Doherty, 2006), and/or ability to balance school and other personal responsibilities (Nakajima et al., 2012). The presence of a peer mentor may lead to improved relationships among class members, increased student accountability, and a feeling of shared educational support. Potentially, peer mentoring will have a positive effect on a wide range of factors including students' confidence in their ability to complete coursework, improved attendance, and a reduction in the number who withdraw from class (Eggen, Van der Werf, & Bosker, 2008; Zhao & Kuh, 2004).

Participation in this study was voluntary. Participants were self-selected students from an Introduction to Business class (MGMT 1120), a commonly chosen beginning management course. Mentor participation was voluntary as well, with mentors available from Team Project (MGMT 2215), the management capstone course. While many traditional mentoring studies use one-on-one mentoring, this study used two mentees assigned to each participating mentor (Howard & Smith-Goodwin, 2010). Reasoning for this ratio of two-to-one in a mentoring relationship was because of the lack of available mentors from the management capstone class where enrollment is lower than the introduction to business class. Also, perhaps having several people participating in a group will foster greater social interaction and allow participants to share ideas and experiences amongst themselves. Research by Beachboard et al. (2011) and Howard and Smith-Goodwin (2010) suggests that people actively engaged in learning together has shown potential in increasing student success rates.
Research Questions

One of the challenges of action research is that it must, by definition, be actionable: that is, the typical practitioner does not have unlimited resources, time, or money to complete the work, nor does he or she get to pick the perfect subjects (Mertler, 2012, p. 22). This study was designed to take advantage of these limitations of action research, turning these instead into strengths. This study sought to answer the following questions:

1. Does a peer-to-peer mentoring program increase student engagement?
2. Does a peer-to-peer mentoring program increase students' academic confidence?
3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?
4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?

Rationale

There were numerous reasons why conducting this study was important. Ultimately, the overall goal was to gain a deeper understanding of technical college students and uncover data that may potentially help them succeed in completing their program of study. Unfortunately, there was a lack of research pertaining to technical college students and no research found regarding peer-to-peer mentoring in technical education, a gap which this action research study may help fill. This study also provided a greater understanding about the impact of a peer-to-
peer mentoring program and provided answers to research questions posed. Also, this research will add to the existing body of knowledge regarding mentoring and student persistence, which may help other colleges developing programs designed to increase student persistence rates.

More specifically, this study sought to identify if peer mentoring increases student engagement or involvement in their educational experience and what aspects of the mentoring experience they attribute to this increase. Also, does the presence of a peer mentor increase a student’s belief about their ability to succeed academically, and if so, what part(s) of the relationship provided this confidence? Lastly, did having a peer mentor have a positive effect on student satisfaction with their technical college experience and what components in the relationship fostered this satisfaction? During the analysis of data, trends were identified to determine which components of the mentoring experience impacted student engagement, academic confidence, and satisfaction.

Additionally, this study may have applicability to other technical college programs and institutions. Mentoring was shown to have a positive effect on students becoming engaged in their educational experience, increased confidence, and greater satisfaction with their institution. The study can be easily replicated among other programs and colleges. The mentoring curriculum is generic rather than program specific. The only logistical details to work out would be the selection of mentors from other programs since this study specifies a student completing their capstone class to serve as the mentor. Other programs could possibly choose mentors based on program specific requirements.

Lastly, this study provided a host of demographic information regarding the impact of peer-to-peer mentoring. Specifically how those of a specific race, age, or gender benefited when participating in a mentoring relationship. Ultimately, this study provided deeper understanding
of the students choosing technical education and identify possible interventions that could perhaps lead to greater student success.

**Research Design**

**Action Research Defined**

Action research is used by educational practitioners to try something new in the classroom and document the effects, positive or negative, that a certain intervention may have on student outcomes. Zambo's (2011), use of action research in education creates educational leaders: teachers who are able to note educational problems, design solutions, and, as she puts it, “create effective change” (p. 261). Action research differs from traditional experimental research in that there is no separation of a control and experimental group. Instead, all students participating are given the intervention that might help them, and the results are noted, with corresponding changes made to the teacher’s practice as dictated or suggested by these results.

**Importance of Action Research**

In education, student success should be the ultimate goal. Action research allows the researcher to investigate issues pertaining to practice and use current research for improvement (Mertler, 2012). This is accomplished by use of the action research processes; reflection in and on practice, asking open ended questions, collection of data, and analysis (Merino & Holmes, 2006).

There has been a considerable amount of research regarding the use of action research and its impact on practice (Kraft, 2002; Merino & Holmes, 2006; Mertler, 2012; Mills, 2003; Zambo, 2011). Over the past several decades, concerns have been expressed from the public as well as government for improvement in the schools (Mertler, 2012). Not surprisingly, teachers usually receive most of the blame for educational shortfalls. While teachers do share some of the
responsibility, administration and school systems, and parents also play a critical role in student success. Pinpointing root causes for failure has proven difficult. One of the key causes of failure is the difficulty teachers’ face in applying traditional research and theory in their particular setting. Use of action research may possibly alleviate this problem by approaching research from the perspective of the teacher and examine “what am I doing and how do my students learn best?” (Mertler, 2012, p. 13). This essentially describes reflection, focusing on practice and seeking a greater understanding connecting practice with learning. In addition to improving teacher practice, action research can be used to examine how schools operate and how students learn (Mills, 2003).

Action research was justifiable for this study for several reasons. One of the major factors was that traditional research often cannot be applied to technical education. Reasons include differences in the school’s missions, demographics of the students, and overall generalization across the student population (Mertler, 2012, p. 4). In essence, there is no “one size fits all” approach for addressing student failure. To gain a deeper understanding and answer questions regarding student success, we must first look at what we as teachers do and how these interactions impact students. Beginning with observation of what we do, we will hopefully be able to identify areas for interaction. Next a planned interaction is implemented and tested. The action research cycle concludes with reflection on the process with me asking “what worked, what did not work?” “What can I as the researcher/teacher do differently to improve?” (Mertler, 2012, p. 14).
Overview of Action Research Process

This action research project used Riel’s (2010) Progressive Problem Solving with Action Research Model. Several quantitative measures were included for analysis and discussion. These included age, gender, race, and hours spent interacting with mentors. The majority of the data collected was analyzed using qualitative measures to identify trends and common themes. Chapter 4 details the experiences of the participants and an overview of my experience with action research in the experiment. Chapter 5 presents finding from the research.

![Figure 2: Riel's Action Research Model (Riel, 2010)](image)

During the initial course meeting of MGMT 1120, the course in which mentees volunteered, an overview of the mentoring program was provided using a PowerPoint presentation (see Appendix A) detailing the study. Participation was encouraged but not required. Consent forms were distributed to all students prior to administering a pre-survey. Students were encouraged to ask any questions they had regarding their consent to participate in
the study. Students in MGMT 1120 who gave consent to participate were then given the pre mentoring survey attached in the appendices. The survey was used to establish a baseline on student academic confidence, level of engagement, and institutional satisfaction as outlined in the research questions. A definition of student academic confidence, engagement, and institutional satisfaction was provided before each question and students were asked to rate themselves on a scale from 1-10. After rating, the student were asked to describe their current level of student academic confidence, engagement, and institutional satisfaction. Additional narrative-type questions were also used to encourage students to share feelings about their collegiate experience. In order for students to feel comfortable sharing this information, surveys were completed using a numbering system rather than student names. Each survey was numbered, and students were asked to record their assigned number for use in completion of the post-survey. These questions were used to determine how much time students spend on academic preparation, such as homework and reading, and how much time they spend interacting with their peers from college.

After completing the survey, during the first week of the study, a mandatory meeting for those who elected to participate was held during the first week of the semester and conducted by myself. Participants included mentees from MGMT 1120 and mentors from MGMT 2215. The meeting began with an overview of the study and students became better acquainted by introducing themselves to the group. Students received a code of conduct governing the mentoring relationship, copies of instruments to be used, and information about data submission procedures using the college learning management system (Angel). Consent forms were verified that those present had given consent to participate and mentees (MGMT 1120) were randomly matched with mentors (MGMT 2215). Questions from participants were fielded and answered.
Because no comparable study existed in the current body of literature, a mentoring program was designed to be easy to follow and flexible for the needs of each individual participating. In this program, all students serving as mentors had completed specific training on how to mentor using the mentoring curriculum prior to the study commencing. A weekly checklist detailing specific items to be covered during the mentoring process was provided to ensure all mentees received specific information identified for new student success. Students and mentors were asked to schedule specific time each week to meet but were also encouraged to interact at whatever level they felt comfortable, including socially. These interactions took place in many formats and included live meetings, online exchanges, social media, text, and telephone. At these meetings, students reflected on their progress in the class, compared ideas, and, as they decided was required, studied together. Throughout the process, at three different points in the semester, mentees were asked to write a reflection on how they felt they were progressing in the class, what they were getting, if anything, out of the mentoring relationship, any concerns they had and other similar questions. These questions were designed to elicit narrative feedback. Mentors were also asked to write three reflection reports about the mentoring experience regarding what was working or not working, time they spent together outside of the requirements, as well as what context that time was spent in. For example, were they getting a meal together, did they study for a test together, and did this take place on or off campus? Both mentee and mentor reflection reports were submitted online using Angel, the college’s learning management system (LMS).

The narrative data obtained through three action research cycles was analyzed using narrative analysis, looking for trends in student experiences and ideas about the mentoring partnership. This data was also used to implement change during the process. At the end of the
semester, students filled out a similar survey to what they did at the beginning of the research and recorded their initial survey number on it. This allowed changes in the data to be tracked in a quantitative sense: numbers were easy to compare on each question from the beginning of the semester and the end.

**Action Research Cycles**

*Cycle 1.* After successful completion of the mentoring curriculum training, mentors were paired with up to two mentees using random selection. They were encouraged to meet as a group but could meet individually with their mentor if there is a scheduling conflict. At the beginning of the semester, mentors and mentees attended a meeting in which ground rules of the program were shared and discussed. Requirements for submitting weekly mentor and mentee reports online using the designated Angel Learning course were demonstrated. Copies of the weekly mentor and mentee responsibility checklists were distributed and explained, and participants were encouraged to go beyond the requirements, expanding when appropriate on interaction and weekly topics. This included: open lines of communication, frequent face-to-face meetings, and openness to sharing of expectations and concerns. This was the planning phase of the action research process and consumed the first week of the semester. Students then proceeded to the acting phase (week 2): initiating the mentoring program. During this phase, students received mentoring for classroom success, and mentors used tools learned from their mentoring curriculum. The action phase was conducted for three weeks. The observation phase of action research was conducted by me during this time as well. A researcher journal was kept noting any changes in student behavior to compare to data collected from student weekly reports and reflection reports. Mentees and mentors both submitted reflection papers to provide details from both perspectives of the relationship. Week five was spent reflecting on successes and
failures of the first action research cycle. Using data submitted from participants as well as researcher observations, adjustments were incorporated to the mentoring process and continued. For instance, students may have reported that they feel they are not receiving enough face-to-face time with mentors or that mentoring is not focusing enough on academics. A solution would have been to make adjustments in the amount of time required for weekly face-to-face meetings or suggestions for bi-weekly meetings and emphasize that mentoring focus more on academic components rather than social components. During week five while reflection was being conducted, the mentoring process continued as before while adjustments were decided.

**Cycle 2.** Changes to the mentoring program were instituted beginning in week six and were contingent on the data analysis from weeks one through five. Changes to the mentoring program were clearly communicated with participants via email and postings on Angel Learning. The second phase of the action research cycle ran from weeks six through nine. As with the first cycle, researcher observations of the mentoring program were recorded and evaluation of changes implemented were monitored. An additional reflection paper was submitted by participants at the end of week nine. Data analysis was performed using weekly mentor and mentee reporting and reflection papers. Additional changes were identified and incorporated in the third action cycle.

**Cycle 3.** The final cycle began in week eleven and continued through week fifteen. Changes to the mentoring process were instituted after data analysis had been conducted in week ten. The actionable phase was conducted during weeks twelve, thirteen, and fourteen. At the conclusion of week fourteen, students were given a printed post survey and asked to record their initial survey number on it. Weeks fifteen and sixteen were spent analyzing data collected and reflection on the effectiveness of the changes implemented as well as the overall success of the
mentoring experience. Even though the findings of this study concluded after sixteen weeks, I remained cognizant of areas for improvement to the process for future implementation, a key aspect of action research.

**Research Site**

The research site for this study was at a technical college in the Technical College System of Georgia. More specifically, a business management classroom was used to facilitate the mentoring program and was made available after scheduled courses for peer mentoring interaction. The classroom accommodated 25 students. In addition, laptop computers were available in the classroom if needed. The college also has a state-of-the-art library and a new center for teaching and learning. Each of these were utilized for training, social gathering, and academic research as part of the mentoring program.

**Participants**

Participation in this study was voluntary. Participants were self-selected students from MGMT 1120, an Introduction to Business class, and a commonly chosen beginning management course. The cap for enrollment for the course was 25 students and enrollment for this class is typically between 20-25 students. Mentor participation was voluntary as well and mentors were enrolled in MGMT 2215 (Team Project), the management capstone course. A total of 11 students initially volunteered to be mentored and 6 agreed to serve as mentors. During the first action research cycle, 2 mentees and 1 mentor withdrew from the study leaving a total of 9 mentees and 5 mentors.

Students at this college, like students throughout Georgia's technical college system, are a diverse group (TCSG, 2014a). Many are the first in their families to pursue higher education of any kind. While some graduated from secondary school, others have General Education
Diplomas (GEDs). A majority of these students go to school part-time and maintain self-supporting jobs. Some of these students also have families. Students range in age. While slim majorities are traditionally-aged college students, many are returning to higher education or coming to it for the first time as older adults. Demographics of this mentoring project reflected the diversity of technical college’s student population (TCSG, 2014a). Table 1 provides a host of demographic information regarding participants for this study sample. Additionally, a comparison to the demographics of all Georgia technical college students is provided along with national demographics for two-year institutions.
Table 1  
*Demographics of the Technical College for Study in Comparison to National Averages for Two-year Institutions*

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Study Sample</th>
<th>% of Total</th>
<th>TCSG State Total</th>
<th>% of State Total</th>
<th>National Percentages 2-Year Institution 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 21</td>
<td>1451</td>
<td>29.8%</td>
<td>30,981</td>
<td>33.3%</td>
<td>28.5%</td>
</tr>
<tr>
<td>21 to 25</td>
<td>1322</td>
<td>27.1%</td>
<td>22,939</td>
<td>24.7%</td>
<td>31.1%</td>
</tr>
<tr>
<td>26 to 30</td>
<td>606</td>
<td>12.4%</td>
<td>12,015</td>
<td>12.9%</td>
<td>13.5%</td>
</tr>
<tr>
<td>31 to 35</td>
<td>414</td>
<td>8.5%</td>
<td>8332</td>
<td>9%</td>
<td>8.5%</td>
</tr>
<tr>
<td>36 to 40</td>
<td>354</td>
<td>7.3%</td>
<td>6037</td>
<td>6.5%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Over 40</td>
<td>728</td>
<td>14.9%</td>
<td>12,694</td>
<td>13.6%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>4875</td>
<td></td>
<td>92,998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full &amp; Part Time</th>
<th>Study Sample</th>
<th>% of Total</th>
<th>TCSG State Total</th>
<th>% of State Total</th>
<th>National Percentages 2-Year Institution 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>1950</td>
<td>40%</td>
<td>30,970</td>
<td>33.3%</td>
<td>41%</td>
</tr>
<tr>
<td>Part Time</td>
<td>2925</td>
<td>60%</td>
<td>62,028</td>
<td>66.7%</td>
<td>59%</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>4875</td>
<td></td>
<td>92,998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Study Sample</th>
<th>% of Total</th>
<th>TCSG State Total</th>
<th>% of State Total</th>
<th>National Percentages 2-Year Institution 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1675</td>
<td>34.4%</td>
<td>34,787</td>
<td>37.4%</td>
<td>42.6%</td>
</tr>
<tr>
<td>Female</td>
<td>3200</td>
<td>65.6%</td>
<td>58,211</td>
<td>62.6%</td>
<td>57.4%</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>4875</td>
<td></td>
<td>92,998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/ Ethnicity</th>
<th>Study Sample</th>
<th>% of Total</th>
<th>TCSG State Total</th>
<th>% of State Total</th>
<th>National Percentages 2-Year Institution 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian</td>
<td>10</td>
<td>0.6%</td>
<td>303</td>
<td>0.3%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>55</td>
<td>1.1%</td>
<td>1630</td>
<td>1.8%</td>
<td>5.6</td>
</tr>
<tr>
<td>Black</td>
<td>2004</td>
<td>41.1%</td>
<td>36,653</td>
<td>39.4%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>162</td>
<td>3.3%</td>
<td>5371</td>
<td>5.8%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>3</td>
<td>0.1%</td>
<td>129</td>
<td>0.1%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>39</td>
<td>0.8%</td>
<td>1308</td>
<td>1.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>10</td>
<td>0.6%</td>
<td>1410</td>
<td>1.5%</td>
<td>N/A</td>
</tr>
<tr>
<td>White</td>
<td>2680</td>
<td>51.7%</td>
<td>46,194</td>
<td>49.7%</td>
<td>54.3%</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>4875</td>
<td></td>
<td>92,998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education level</th>
<th>Study Sample</th>
<th>% of Total</th>
<th>TCSG State Total</th>
<th>% of State Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 12</td>
<td>365</td>
<td>7.5%</td>
<td>10,282</td>
<td>11.1%</td>
</tr>
<tr>
<td>GED</td>
<td>536</td>
<td>11%</td>
<td>10,2017</td>
<td>11%</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>2308</td>
<td>47.3%</td>
<td>47,551</td>
<td>51.1%</td>
</tr>
<tr>
<td>1-3 yrs Postsecondary</td>
<td>1620</td>
<td>33.2%</td>
<td>22,815</td>
<td>24.5%</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>40</td>
<td>0.8%</td>
<td>1866</td>
<td>2%</td>
</tr>
<tr>
<td>Greater than Bachelor</td>
<td>6</td>
<td>0.1%</td>
<td>267</td>
<td>0.3%</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>4875</td>
<td></td>
<td>92,998</td>
<td></td>
</tr>
</tbody>
</table>
This study was open to all students enrolled in MGMT 1120. After an explanation of what the mentoring program entailed, students decided if they want to be involved and expressed a desire to participate by completing the consent form prior to taking the pre-survey at the beginning of the semester. Each survey was numbered depending on the enrollment for the class and analyzed after completion. Students were asked to record their number from the survey they completed to be referenced when completing the post survey.

Mentors were self-selected from Team Project, one of the final management courses taken for completion of the degree and diploma. Students enrolled in this course successfully completed the majority of their general education core classes as well as their occupational core demonstrating the propensity for success. Students typically complete this course in their final semester. The course requires students to complete various projects while working in a team setting. In order to acquire mentors for participation, the roster of Team Project was evaluated and potential mentors were be contacted by email containing details of the study. Students completing their management capstone course must demonstrate twelve various competencies for the course. Competencies are demonstrated through written reports, presentations, and demonstrations. Training is one of these competencies. Students who choose to serve as a mentor were allowed to use participation in this study to satisfy that competency requirement. With current student registration, this allowed two months of correspondence and training opportunities before the semester began. A recruitment email (see Appendix B) was sent to all potential mentors providing details of the study. Requirements to serve as a mentor entailed a desire to share best practices, a GPA of 3.0 or higher, and a commitment to meet weekly with the mentees as well as maintaining a weekly log of the mentoring relationship and completion of the mentoring training curriculum in the semester prior to the beginning of the study.
Instruments

Numerous instruments were used for data collection. These included the consent forms for both mentors and mentees, pre and post surveys, the mentor training curriculum, weekly responsibility checklists for mentee and mentor with activities and goals, weekly mentee reports, and reflection papers submitted at the end of each action research cycle.

Students who wished to participate in the study provided permission by signing consent forms (see Appendix C, Appendix D). Only students from MGMT 1120 who had signed consent forms took the pre and post mentee surveys (see Appendix E, Appendix F). These instruments were designed to provide specific data for analysis at the beginning and end of the experiment. Both qualitative and quantitative data was obtained for analysis along with demographic information. Students who agreed to participate from MGMT 1120 completed this individual survey on the first day of the semester during class. The post survey was also be completed in the classroom on the last day of class by those who provided consent at the beginning of the study.

The weekly mentee report (see Appendix G), was submitted at the end of each week and provided real time feedback to me to evaluate the mentoring experience and make adjustments accordingly. This report was completed individually and submitted electronically using Angel Learning. Submissions were due on Sunday nights. This allowed for evaluation of data at the beginning of the week to communicate changes to the mentoring program by two methods: an email sent through the online course and an announcement in the live classroom. For example, several participants suggested that they did not feel they are spending enough time with their mentor. Adjustments to the required meeting times were made accordingly. Or perhaps mentees felt a particular topic such as using GALILEO did not have enough time allocated for that week.
In this instance, mentors were asked to provide additional time with the mentee on that particular topic.

The mentoring curriculum (see Appendix H) was an eight hour training session all mentors participating in the experiment and was completed prior to assignment of a mentee. This training was conducted during the fall semester, the semester before the study commenced. It was conducted in one of the business management classrooms. Training consisted of four two-hour sessions. Resources detailing each topic were supplied to each mentor candidate.

For clarification on what activities should be taking place during the mentoring experience, weekly checklists (see Appendix I, Appendix J) were provided for both mentor and mentee. This focused on the minimum activities participants should complete, but they were encouraged to go beyond the minimum activities listed. In addition to having hard copies, participants were also required to log on to the online course and acknowledge they have completed the weekly activity. This was due on Sunday night of each week.

The last instrument used was an individual reflection paper submitted by both mentee and mentor at the conclusion of each action research cycle. This was a typed paper ranging from one to two pages in length. Students receiving mentoring answered narrative question regarding student engagement, academic confidence, and institutional satisfaction. A template was used to provide clarification on the type of information to provide (see Appendix K, Appendix L). Students were also encouraged to share additional thoughts on the mentoring process and to provide positive as well as negative feedback. For the mentee, this included things such as describe your mentoring experience so far, provide details of what benefits you have experienced as a result of having a mentor, things that you dislike about the mentoring relationship, and suggestions for improvement. This was submitted at the end of each action research cycle using
the Angel Learning drop box and was in a Word document. For the mentor, suggestions included please describe your experience as a mentor, what do feel is working and not working, and suggestions for improvement.

**Data Collection Procedures**

Data from this study was collected in both qualitative and quantitative forms. Table 2 illustrates the type of data collected and the frequency of collection.

Table 2

*Implementation of Data Collection Measures*

<table>
<thead>
<tr>
<th>Type</th>
<th>Action Research Cycle 1 (Weeks 1-5)</th>
<th>Action Research Cycle 2 (Weeks 6-10)</th>
<th>Action Research Cycle 2 (Weeks 11-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Survey</td>
<td>Qualitative/Quantitative Initial Survey (week 1)</td>
<td>Qualitative/Quantitative Mentee/Mentor Log</td>
<td>Qualitative/Quantitative Mentee/Mentor Log</td>
</tr>
<tr>
<td>Weekly</td>
<td>Qualitative/Quantitative Mentee/Mentor Log (week 5)</td>
<td>Qualitative/Quantitative Mentee/Mentor Log (week 10)</td>
<td>Qualitative/Quantitative Mentee/Mentor Log (week 15)</td>
</tr>
<tr>
<td>Periodic</td>
<td>Qualitative Mentee/Mentor Reflection Paper (week 5)</td>
<td>Qualitative Mentee/Mentor Reflection Paper (week 10)</td>
<td>Qualitative Mentee/Mentor Reflection Paper (week 15)</td>
</tr>
</tbody>
</table>

Quantitative data was collected from the surveys given at both the beginning and end of class. These surveys included basic demographic information, such as students' age and gender. Students were also asked to rate their level of engagement, academic confidence, and institutional satisfaction on a scale from 1-10 on both the pre and post survey.

Much of the data collected, however, was qualitative in nature. Both pre and post surveys asked students to describe their level of engagement, academic confidence, and
institutional satisfaction. Additionally, several open ended questions were asked on the post survey in which students could provide general feedback about the mentoring experience.

During the mentoring process, data was collected on a weekly basis. This allowed me to identify parts of the process for improvement (action research). This data came in several forms. One of these was a weekly report of each meeting between a mentor and mentees. A tracking sheet provided qualitative and quantitative documentation and was prepared following each meeting and consisted of the following types of information: duration of meeting, meeting location and time, person initiating the meeting, and focus of conversation during the meeting. The peer mentored students as well as mentors also submitted reflection papers at weeks five, ten, and fifteen. Reflection papers provided details specific to the research questions and allowed students to express what they felt was working in the mentoring relationship, changes they wanted to see, and how the mentoring relationship was affecting them academically and socially. Reflection papers from mentors provided details of what they felt was and was not working in the mentoring relationship, feedback on the weekly agenda, and suggestions for improvement to the program. Analysis of this data provided crucial details of the inter-workings of the mentoring experience and allowed real-time changes to the process.

All data submissions, with the exception of the paper pre and post-surveys, were performed using Angel Learning. An online course shell was created and all participating mentors and mentees were enrolled in the course. Mentors encouraged mentees to submit timely documentation and would include this reminder as a part of their weekly contact.
Data Analysis Procedures

Data was analyzed in several ways. While this was primarily a qualitative action research study, several quantitative measures were used. First, quantitative data was tabulated and recorded using an Excel spreadsheet and examined using descriptive statistics. Questions on the pre and post survey in which students rate their engagement, academic confidence and institutional satisfaction were analyzed. The pre-survey mean scores for each question were compared to the post-survey mean scores to determine if peer-to-peer mentoring exhibited an effect on participants. These answers were correlated against a host of demographic pieces of data, including students' gender, age, and race. Bar charts were used to illustrate the quantitative data and findings are thoroughly discussed in Chapter 5.

Additional numerical data was analyzed in a similar fashion to provide additional details about peer-to-peer mentoring. This included average weekly time spent in a mentoring relationship, frequency of contact, and who initiated the contact. Numerical data was also gathered from the logs of mentoring meetings with an eye toward determining an average number of meetings as well as length of meetings. While qualitative data was the main focus of this research, it was worthwhile to examine quantitative aspects to gain a deeper understanding of impact of mentoring on student performance and potentially uncover useful information.

Narrative data was collected from the pre-study and post-study surveys, weekly mentee reports as well as from the opportunities for reflection during the process. All data was submitted electronically using Angel Learning and was submitted in weekly folders. This data was examined in order to answer the posed research questions and provide a greater understanding of students' unique experiences within the mentoring portion of the study. Narrative data was uploaded into QDA Miner Lite, a qualitative data analysis program.
Themes were identified in the narrative data and a coding system developed. This process is thoroughly discussed in Chapters 4 and 5. Table 3 lists each research question, the instrument used, and type of analysis performed.

Table 3.

Data Analysis for Research Questions

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Instrument</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does a peer-to-peer mentoring program increase student engagement?</td>
<td>Pre and Post Survey</td>
<td>Narrative Inquiry, Descriptive Statistics means, percentile</td>
</tr>
<tr>
<td></td>
<td>Reflection Report</td>
<td></td>
</tr>
<tr>
<td>2. Does a peer-to-peer mentoring program increase students' academic confidence?</td>
<td>Pre and Post Survey</td>
<td>Narrative Inquiry, Descriptive Statistics means, percentile</td>
</tr>
<tr>
<td></td>
<td>Reflection Report</td>
<td></td>
</tr>
<tr>
<td>3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?</td>
<td>Pre and Post Survey</td>
<td>Narrative Inquiry, Descriptive Statistics means, percentile</td>
</tr>
<tr>
<td></td>
<td>Reflection Report</td>
<td></td>
</tr>
<tr>
<td>4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?</td>
<td>Pre and Post Survey</td>
<td>Descriptive Statistics means, percentile</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?</td>
<td>Pre and Post Survey</td>
<td>Descriptive Statistics means, percentile</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?</td>
<td>Pre and Post Survey</td>
<td>Descriptive Statistics means, percentile</td>
</tr>
</tbody>
</table>
Reporting Findings

Findings have been reported in various narrative forms with accompanying charts, tables, and/or graphs as needed in Chapters 4 and 5. Because this project was primarily a qualitative study, the narrative form for reporting data gave the most flexibility. This form allowed for all the possible responses to be fully explored and for the wide range of student experiences to be adequately represented. A part of the findings report also consists of direct quotes from students in the mentoring program.

Particularly significant findings resulting with particular mentor pairs, case studies of specific pairings and their effects on the students' achievement, engagement, and confidence has been included as a part of the reported findings. Because the project involved the individual experiences and relationships of students, reporting using their own words was preferable. Having multiple forms of reportage for the information garnered by this study allows for future researchers to determine which parts of the study may point toward practicable avenues of exploration for their own action research or their own classroom practice.

Validity and Reliability

The instruments used in the mentoring study have undergone several tests for validity and reliability. To ensure all instruments were valid, both quantitative and qualitative, an expert panel consisting of the college president, a vice president, and a PhD faculty member reviewed and recommended changes. Use of three or more content experts when incorporating action research instruments is an acceptable method to ensure instrument reliability and validity (Fletcher & Marchildon, 2014). Changes identified and recommended by the panel were incorporated in the instruments.
Additional methods to ensure validity of instruments included conducting a pilot survey of the pre and post survey on students enrolled in an MGMT 1120 course, the course in which future mentees were chosen from. The pre and post survey each contain three 1-10 scale items for students to rate their level of engagement, academic confidence, and institutional satisfaction followed by narrative questions in which they describe their current levels of each. Feedback on the survey was evaluated and changes incorporated. Descriptions of student engagement, academic confidence, and institutional satisfaction were added to provide clarity.

The validity of this action research study primarily focused on qualitative measures. Instruments sought to ascertain answers to the posed research questions through written responses from participants. Though questions were designed to prompt the participant to provide specific feedback, both positive and negative, additional writing assignments where the participant was free to share any information about the mentoring process were also used. In addition to providing answers for the research questions, beneficial information has also been uncovered for future research and a deeper understanding to improve practice. Additionally, as with any research, reliability is determined by the repeatability of results from this study. To properly test this study’s reliability, the study will need to be repeated using similar participants, treatment, and research design, and analysis.

**Methodological Limitations**

There were several limitations I was cognizant of when using action research and collecting qualitative data. These included researcher bias and preconceived notions about the study and the detriment they posed when interpreting qualitative data. Also, there was large amounts of data collected. This was not only time consuming but required careful interpretation and analysis. Additionally, being present during data collection could affect participant
responses. To limit this, submission of written documents was conducted using the online learning system, Angel.

Other limitations for action research and qualitative data collection are difficulties providing clear visual demonstrations of findings and general acceptance of qualitative research by traditional quantitative researchers. This is generally attributed to researcher bias being inevitable during data collection and analysis (Waters-Adams, 2006).

**Ethical Considerations**

The ethical considerations involved in this study were few. All participants were asked whether or not they wish to participate and no coercion was used to encourage participation. Student identifying details shared in the narrative portions of the data were redacted from the findings when presented. Students were informed that their decision to participate or not participate in the study had no bearing on their final grade in my class. No student was offered an unfair advantage in class due to this mentoring partnership, and no student was held back in any way from academic success in the class. Therefore, as long as data was collected without identifying details and as long as students remained comfortable with the questions asked by the study and were given the option to opt out at any time, there were minimal ethical concerns in play.

**Researcher Bias, Subjectivities, and/or Assumptions**

The importance of valid and reliable data was understood, and I was aware of personal bias and preconceived notions about mentoring. To ensure valid data, results were accepted regardless of preconceived expectations and results used for improvement of practice. The prescribed research design was followed and change implemented only when allowable in the action research cycles.
In order to avoid bias with qualitative research, I was aware of subjectivity and assumptions while conducting the research, data collection, and analysis. The researcher’s personal feelings or expected outcomes should be realized in order to not skew the data interpretation (Creswell, 2014). Also, due to a considerable amount of time involved in collection and analysis of data, I made a conscious effort to use an “outside looking in” perspective in regards to data interpretation.

An additional issue I was aware of was that of being the sole researcher. To produce credible findings, objectivity had to be maintained regardless of beliefs or preconceived notions of outcomes. Beliefs that peer-to-peer mentoring could have an enormous impact on student success, did not interfere with objectivity in order to produce credible data.

To help ensure reliable data collection and analysis, several measures were incorporated into the collection and analysis phases. The first was a conscious reflection during data analysis. Mantzoukas (2005) highly recommends reflection on researcher’s bias. Once a researcher’s bias is identified, conscious awareness of these biases should be included during data analysis. Since this action research design incorporated a reflection stage at the end of each cycle to process what had taken place, this provided the perfect opportunity for bias reflection. An additional measure used to help curb bias in the study included analysis of the same data on two different days to ensure interpretation remains the same.

**Research Timeline**

The timeline for completion of this action research design study began with preliminary work in the fall of 2014. Several important steps were completed prior to performing the actual study. These included completion of the prospectus, University of Georgia IRB approval (STUDY00001400) and approval from the Technical College System of Georgia (see Appendix
Upon completion of these activities, selection and training of mentors who voluntarily chose to participate in the study began. Training took approximately two weeks to complete.

Preliminary work, including the creation of an online course strictly for document submission, was completed in November of 2014.

The action research study involving mentors and mentees commenced the second day of spring semester, 2015. The first action research cycle was conducted for four weeks followed by one week of researcher data analysis and reflection. Changes justified by the first cycle’s data was implemented, and cycle two began at week six of the semester. Mentoring continued through week nine and concluded with additional data submission. Week ten was used as researcher reflection and analysis. Changes for the third and final cycle were identified and incorporated. The final cycle begin at the beginning of week eleven and concluded at the end of week fourteen. Participants submitted their final documents used for data analysis.

Data analysis for the study began in May of 2015 along with writing of Chapter 4 to provide details of my experiences using action research as well as the experiences of participants (mentees and mentors) in their own words. Chapter 5, findings from the research, began in early July, 2015 and concluded in early August, 2015. Chapter 6, discussion and conclusions, was completed in August, 2015.
CHAPTER 4

PARTICIPANT EXPERIENCES AND ACTION RESEARCH CYCLES

This chapter discusses the experiences of participants in the peer-to-peer mentoring program, both mentee and mentor, and describe the three action research cycles along with changes implemented at the conclusion of each cycle. Three participant reflection reports were used to provide a snapshot of each participant’s experience which in turn was used as a basis for changes implemented in the three action research cycles of the study. The narratives in Chapter 4, along with pre and post survey questions, were used to answer the six research questions that follow. Detailed findings are presented in Chapter 5 and thoroughly discussed in Chapter 6.

1. Does a peer-to-peer mentoring program increase student engagement?

2. Does a peer-to-peer mentoring program increase students' academic confidence?

3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?

4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?

5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?

6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
Narratives used students’ (mentors and mentees) own words to describe their personal backgrounds and perceptions about study participation. Mentee background data were obtained using a survey prior to commencement of the study. No mentor background data were collected. Mentor introductions were constructed from information obtained from previous instructor/student interaction and notes recorded in the researcher journal. Using Riel’s (2010) Three Cycle Action Research Model as a guide, mentors and mentees submitted reflection reports (3) at the end of each action research cycle, approximately one page in length. Reflective reports offered opportunities for participants to discuss the research questions proposed for this study and provide feedback on what they felt was and was not working in the mentor/mentee relationship.

To analyze approximately forty pages of data, inductive analysis was performed using Creswell’s (2002) Coding Process in Inductive Analysis (see Table 4) as a guide. Inductive analysis was chosen to reduce the volume of data into manageable patterns in order for common themes to emerge (Mertler, 2012). Narrative data was collected and uploaded into QDA Miner Lite, a qualitative software analysis tool.

The following procedures were used for inductive analysis of qualitative data and illustrated in Table 4 below:

1. Collection and formatting of raw data files by participant and sequencing in order of submission.
2. Reading of the text on two separate occasions to understand the content and context of the data to gain understanding of events.
3. Line-by-line coding of the data.
4. Reduction of the number of codes to specifically address research questions.
5. Grouping of codes into categories/themes.
Revise and refine categories to create a small number of categories to address key themes in the raw data.

Table 4

*The Coding Process in Inductive Analysis*

<table>
<thead>
<tr>
<th>Participant data</th>
<th>Identification of specific text related to research question</th>
<th>Creation of text categories</th>
<th>Refine and reduce redundancy of categories</th>
<th>Model creation of most important categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many pages of text</td>
<td>Many segments of text</td>
<td>30 to 40 categories</td>
<td>15 to 20 categories</td>
<td>3 to 8 categories</td>
</tr>
</tbody>
</table>

The following coding system was used to identify themes related to the research questions and provide analysis of student narratives over the course of the experiment. Table 5 provides the categories, individual codes, number of instances, and percentage of total codes recorded.
Table 5

*Qualitative Analysis Coding*

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Count</th>
<th>% of Total Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
<td>positive</td>
<td>65</td>
<td>23.30</td>
</tr>
<tr>
<td>Mentoring</td>
<td>negative</td>
<td>17</td>
<td>6.10</td>
</tr>
<tr>
<td>Mentoring</td>
<td>neutral</td>
<td>22</td>
<td>7.90</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>21</td>
<td>7.50</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>6</td>
<td>2.20</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>22</td>
<td>7.90</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>college activities</td>
<td>9</td>
<td>3.20</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>coursework</td>
<td>9</td>
<td>3.20</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>32</td>
<td>11.50</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>no change</td>
<td>5</td>
<td>1.80</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>characteristics</td>
<td>3</td>
<td>1.10</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school- negative</td>
<td>6</td>
<td>2.20</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school- positive</td>
<td>20</td>
<td>7.20</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>11</td>
<td>3.90</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>activities</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Time</td>
<td>waste</td>
<td>4</td>
<td>1.40</td>
</tr>
<tr>
<td>Time</td>
<td>lack of</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Time</td>
<td>amount</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Time</td>
<td>schedule</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Goals</td>
<td>achieve</td>
<td>7</td>
<td>2.50</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>7</td>
<td>2.50</td>
</tr>
<tr>
<td>Doubt</td>
<td>afraid</td>
<td>2</td>
<td>0.70</td>
</tr>
<tr>
<td>Doubt</td>
<td>goal attainment</td>
<td>3</td>
<td>1.10</td>
</tr>
</tbody>
</table>
Tables 6 and 7 provide characteristics of the nine mentees and five mentors who participated in this research study. Each participant’s experience provided in three reflection reports was compiled and coded to identify trends in individual participant’s experience. To provide anonymity, fictional names were assigned to all participants and used in all references to those participants; including tables, narratives, findings, and discussions.

Table 6

Descriptive Data for Participants in Mentoring Study (mentees)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>College Credits Completed</th>
<th>Current GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belinda</td>
<td>42</td>
<td>Female</td>
<td>African American</td>
<td>18</td>
<td>3.0</td>
</tr>
<tr>
<td>Allen</td>
<td>27</td>
<td>Male</td>
<td>Caucasian</td>
<td>12</td>
<td>3.7</td>
</tr>
<tr>
<td>Doug</td>
<td>21</td>
<td>Male</td>
<td>Caucasian</td>
<td>15</td>
<td>3.5</td>
</tr>
<tr>
<td>Martha</td>
<td>54</td>
<td>Female</td>
<td>African American</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Kim</td>
<td>24</td>
<td>Female</td>
<td>Bi-racial</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Sherri</td>
<td>44</td>
<td>Female</td>
<td>Caucasian</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Kathy</td>
<td>20</td>
<td>Female</td>
<td>Caucasian</td>
<td>27</td>
<td>1.77</td>
</tr>
<tr>
<td>Sharon</td>
<td>32</td>
<td>Female</td>
<td>Caucasian</td>
<td>15</td>
<td>3.0</td>
</tr>
<tr>
<td>Davis</td>
<td>36</td>
<td>Male</td>
<td>Caucasian</td>
<td>15</td>
<td>2.7</td>
</tr>
</tbody>
</table>

*New student, no current GPA

Table 7

Descriptive Data for Participants in Mentoring Study (mentors)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>College Credits Completed</th>
<th>Current GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teresa</td>
<td>42</td>
<td>Female</td>
<td>African American</td>
<td>63</td>
<td>4.0</td>
</tr>
<tr>
<td>Randy</td>
<td>60</td>
<td>Male</td>
<td>African American</td>
<td>70</td>
<td>3.06</td>
</tr>
<tr>
<td>Thomas</td>
<td>32</td>
<td>Male</td>
<td>African American</td>
<td>98</td>
<td>3.25</td>
</tr>
<tr>
<td>Sara</td>
<td>48</td>
<td>Female</td>
<td>African American</td>
<td>51</td>
<td>3.28</td>
</tr>
<tr>
<td>Charles</td>
<td>30</td>
<td>Male</td>
<td>Caucasian</td>
<td>200</td>
<td>3.19</td>
</tr>
</tbody>
</table>
**Action Research Cycles**

This action research study was conducted during the spring semester of 2015 using a systematic approach to understand the student learning process (Mertler, 2012). Three action research cycles were conducted using Riel’s Action Research Model (2010) as a guide. Each cycle consisted of the following phases: (a) study and plan, (b) take action, (c) collect and analyze evidence, and (d) reflect on findings. The decision to use action research for this study was influenced by several core tenants of the action research process: to gather and evaluate feedback from participants and incorporate change during the mentoring research.

Cycle 1 took place during weeks 1 through 5 of the semester. Week 1 of the study was spent recruiting participants and providing details of their role in the study. During weeks 2 through 5, participants were engaged in their respective mentoring roles. Using various instruments, along with researcher observations and notes, data were collected, analyzed and changes implemented to the process. At the end of the first cycle, researcher reflection was conducted to identify what was and was not working and what additional changes needed to be implemented. A group meeting was held with all participants and desired changes communicated. The following week, Cycle 2 commenced.

Cycles 2 and 3 were four weeks in length. As with Cycle 1, changes were incorporated to the study and communicated at group meetings. Table 8 illustrates the application of action research for this study.
Table 8

Application of Action Research

<table>
<thead>
<tr>
<th>Cycle 1</th>
<th>1/13/15</th>
<th>2/15/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study/Plan</td>
<td>1/13/15- Preparation, pre surveys, consent forms, pairing of participants</td>
<td></td>
</tr>
<tr>
<td>Action Phase</td>
<td>1/20/15- Mentoring relationship began</td>
<td></td>
</tr>
<tr>
<td>Collection and Analysis of Data</td>
<td>1/27/15- Weekly mentee reports, reflection papers, synthesis of information</td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>2/9/15- What is working/not working, identify and communicate changes</td>
<td></td>
</tr>
<tr>
<td>Cycle 2</td>
<td>2/17/15</td>
<td>3/15/15</td>
</tr>
<tr>
<td>Study/Plan</td>
<td>2/17/15- Implemented Cycle 1 changes</td>
<td></td>
</tr>
<tr>
<td>Action Phase</td>
<td>2/17/15- Mentoring relationship continued</td>
<td></td>
</tr>
<tr>
<td>Collection and Analysis of Data</td>
<td>2/17/15- Weekly mentee reports, reflection papers, synthesis of information</td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>3/15/15- What is working/not working, identify and communicate changes</td>
<td></td>
</tr>
<tr>
<td>Cycle 3</td>
<td>3/24/15</td>
<td>4/26/15</td>
</tr>
<tr>
<td>Study/Plan</td>
<td>3/24/15- Implemented Cycle 2 changes</td>
<td></td>
</tr>
<tr>
<td>Action Phase</td>
<td>3/24/15- Mentoring relationship continued</td>
<td></td>
</tr>
<tr>
<td>Collection and Analysis of Data</td>
<td>3/24/15- Weekly mentee reports, reflection papers, synthesis of information</td>
<td></td>
</tr>
<tr>
<td>Reflection</td>
<td>4/20/15- What is worked/ did not work Apply and refine as needed</td>
<td></td>
</tr>
</tbody>
</table>

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Data for this study was collected in several ways. Real time data was submitted on a weekly basis (see Appendix G) by participants and provided details that prompted researcher interaction. The report consisted of length of meeting time, who initiated contact, how the interaction took place, was the contact on or off campus, what was discussed, and changes they would like to see made to the process. A researcher journal was also maintained to organize thoughts and observations regarding participants and their interaction in a mentoring relationship. These, in conjunction with a reflection report (see Appendices K, L) submitted by both mentor and mentee at the end of the action research cycle, guided the changes made throughout the course of the study. The following narrative provides details of my experiences as an action researcher.

**Cycle 1**

Prior to commencement of Cycle 1, potential mentors were contacted through email (see Appendix B) during the fall semester. Those that expressed interest were invited to attend a mentoring training workshop held on campus a month prior to the beginning of the semester. A total of six people attended the workshop. Training included defining the role of the mentor, an overview of the mentoring study, discussion of the mentoring curriculum, code of conduct, and document submission. The meeting lasted approximately three hours and all attendees signed a mentor consent form (see Appendix C).

The action research portion of the study began on during the first week of the spring semester. A meeting was held at 8:30am with the 25 potential mentees. Details of the study were provided using a PowerPoint presentation (see Appendix A). Students were informed that participation was voluntary and would have no bearing on their grade for the course. After the presentation, all students were given a copy of the consent form (see Appendix C) and received a
thorough explanation of its details. Students were instructed to turn the consent form in on their way out of the classroom. Students who decided to participate were asked to sign and date their consent form. Students who chose not to participate were instructed to turn in a blank form. A total of ten consent forms were received signed along with fifteen blank forms. All students (mentors and mentees) were added to a non-credit online course using the college’s learning management system. The sole purpose of the course was for document submission, organization of documents, and communication with participants.

During the second meeting of the semester, pre-mentoring surveys (see Appendix E) were administered in the classroom to those who had signed consent forms. A numbering system was used to protect student identity. Each survey was numbered and randomly distributed. Students were asked to record their survey number and to document this number on their post-survey (see Appendix F) at the conclusion of the research study. The team generator in the Angel Peer to Peer Mentoring course was used to randomly generate mentee/mentor pairing. Due to having an unequal number of participants, the generator assigned four mentors with two mentees and two mentors with one mentee each. The remainder of week one was spent preparing for the meet-and-greet session the following week.

A group meeting was held with all participants at the beginning of the second week of the semester. Doughnuts and juice were provided. Mentor and mentee pairings were revealed and participants spent a few minutes introducing themselves to one another. Additional details of the study were provided, and included an overview of the study, why their participation was important, and potential ramifications of the research. Use of the Angel course for document submission and communication was demonstrated and copies of the mentor and mentee weekly curriculum were distributed. The final document distributed was the code of conduct agreement
(see Appendix N). It was thoroughly explained and both mentor and mentees signed and returned the agreement. The action phase of Cycle 1 commenced with the first set of data being submitted after the second week of the semester.

Data were submitted each week during the mentoring program. Weekly reporting data (see Appendix G) were submitted on Sundays detailing the preceding week. The weekly report provided details of how long participants were spending in their mentoring relationship, location of interaction, and what they were collaborating on. Advice on what could improve the process was also provided in the weekly report.

This data served the following purposes (a) to keep the researcher abreast of current events taking place in the study, (b) to identify trends based on analysis of several weeks’ worth of data, and (c) to allow immediate involvement if warranted. For example, during analysis of week 2 reports, several mentees expressed concern that their mentor was not responding fast enough to emails. As the action researcher, I sent a group email stressing the importance of communication, and the exchange of cell phone numbers so that participants could call or text one another. Additionally, as the classroom instructor for both mentors and mentees, issues requiring immediate attention could be quickly addressed, particularly the timely submission of documents.

During the course of the research study, a researcher journal was maintained noting my observations. Similar to a diary, I periodically reflected on what I felt was and was not working with participants, potential changes for improvement in the following cycle, and any relevant information regarding mentoring that surfaced. The following is an excerpt from the researcher journal during Cycle 1.
At the beginning of the second week of the semester, we had our first meet-and-greet between mentor and mentee. They all seemed enthusiastic to participate. The juice and doughnuts didn’t hurt. I was a bit surprised that only ten out of twenty five potential participants chose to join the study. My preconceived notions were that everyone would want to participate. I need to review my PowerPoint presentation to see if anything needs to be changed for future groups that may be used if the study is replicated.

The study has begun with ten mentees and six mentors. Using the team generator in Angel for random pairing was simple enough to make sure I didn’t have any bias in pairing. It appears I have a good variation in characteristics of the mentor/mentee groups. With the odd number of mentee-to-mentor availability, it was easy enough that all the mentors agreed to mentor two instead of one if the team generator assigned those two.

The first set of weekly data has been received. Eight out of ten submitted on time and the majority of interaction is taking place on campus and face-to-face. I will see the students in class (hopefully) next Tuesday and find out the reason for the delay in submitting.

It is the end of week two and I have had my first withdrawals from the study, one mentor and one mentee. The mentor had just begun a new job and felt he/she could not devote the extra time to his/her mentee. The mentee who asked to be withdrawn did so due to school and work responsibilities. I explained the study was designed for that very situation, but did not pressure the mentor and mentee to continue as study participants. The student whose mentor had withdrawn was assigned to the mentor whose mentee had withdrawn.

The study has progressed into week 4. Next week will close cycle 1 and participants will submit reflection reports. I am a bit frustrated with late document submissions. It is not a time consuming ordeal to submit the data at the end of each week. I am also hearing rumblings about
mentors being unavailable during the week to help their mentees. I will confirm once the reflection reports are submitted and I have a few ideas about how to address current issues.

As Cycle 1 concluded, a thorough analysis of data received from weekly reports was conducted, mentor and mentee reflection papers were reviewed, and the researcher journal was updated. Table 9 provides the details of changes implemented for Cycle 2 and methodology used to justify their implementation.

Table 9

**Action Research Cycle 1 Analysis and Changes Implemented**

<table>
<thead>
<tr>
<th>Issue Identified</th>
<th>Justification for Action</th>
<th>Instrument(s) used</th>
<th>Action (s) Implemented for Cycle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistency in weekly live meetings resulting in no or delayed contact.</td>
<td>38% (14/34) of Cycle 1 weekly reports were submitted late. Time conflicts and scheduling issues noted as major cause.</td>
<td>Weekly reporting form, Angel LMS, researcher journal</td>
<td>Alternative methods of communication implemented. Skype, texting, and social media to be used when live meetings are not possible.</td>
</tr>
<tr>
<td>Weekly report document is a Word doc. requiring mentee to login to Angel, download, and submit</td>
<td>Students report submitting weekly reports requires a Word capable PC.</td>
<td>Weekly reporting form, Cycle 1 reflection paper</td>
<td>Weekly reporting form created in Angel survey that can be completed with a smartphone.</td>
</tr>
<tr>
<td>Offsite meetings not allowed per the Code of Conduct Agreement</td>
<td>Participants note potential benefits if allowed to meet in public setting.</td>
<td>Cycle 1 reflection paper, researcher journal</td>
<td>Offsite public meetings allowed but no meetings at one’s residence.</td>
</tr>
<tr>
<td>Some mentors were under the impression that they could only help their mentee in subjects listed on the mentoring curriculum but not class specific help.</td>
<td>Effective mentoring should address the needs of the mentee (Budge, 2006).</td>
<td>Cycle 1 reflection paper</td>
<td>In addition to covering curriculum topics, mentors will provide course specific help when applicable. No completion of homework assignments or test taking by the mentor is allowed.</td>
</tr>
</tbody>
</table>

Data from participant weekly reports was uploaded into an Excel spreadsheet and examined for trends. In evaluating how the mentoring interaction was taking place, Figure 3 illustrates that the majority of interaction was in a face-to-face format. Weeks three and four of
the study revealed participants using alternate methods, but at the conclusion of Cycle 1, interaction was primarily face-to-face.

![Figure 3: Cycle 1 Mentoring Interaction Format. This figure illustrates the medium in which mentoring took place.](image)

Analysis of the amount of time spent weekly in the mentoring relationship is illustrated in Figure 4. Meeting times were sporadic during the first three weeks in the mentoring relationship with a noticeable decrease in time from week 3 to week 4. Noticing this trend, I encouraged mentors to spend additional time with mentees. By week 5, the majority of participants were meeting thirty minutes to an hour.
Figure 4: Cycle 1 Weekly Interaction Time. This figure illustrates weekly participant contact time spent in their mentoring relationship.

Interestingly, the mentors initiated contact almost 100% of the time during weeks 2 through 4. Week 5 illustrates mentees initiating roughly half of the contact. A possible explanation for the noticeable change was provided by an entry in my researcher journal in which I encouraged mentees to reach out to their mentors. This advice was given after several participants mentioned they had not heard from their mentors. The majority of contact between the participants took place on campus. Figure 6 illustrates where the mentoring interaction took place over the course of Cycle 1.
Figure 5: Cycle 1 Who Initiated Contact

Figure 6: Cycle 1 Interaction Location
Cycle 2

Cycle 2 began mid-February with a group meeting of all participants. Biscuits, hash browns, and juice were served. The changes identified in Cycle 1 were communicated and implemented. While the majority of participants expressed satisfaction thus far, several complaints emerged from reflection reports. The majority of dissatisfaction arose from communication problems. Table 10 illustrates some of the communication issues as they appeared in the qualitative analysis codebook.

Table 10

*Negative Responses- Communication*

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Case</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>mentees don't spend enough time getting to know their mentor a lot lately since they've other businesses to attend to</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>changes I would like to see is that the communication between mentors and mentee's</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>Contact is the big problem right now</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>Better, but if mentor don't stay up to date with you. And you just see them whenever isn't good for learning</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>Timing isn't on some of the mentor time clock</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>More communication</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>Communication isn't there. Missing out</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Mentee Reflections</td>
<td>only get in touch as I walk the halls or the library</td>
</tr>
</tbody>
</table>
Cycle 2 progressed in the same format as Cycle 1 with the exception of the previously discussed changes. The mentoring curriculum was followed and weekly documentation submitted. Excerpts from the researcher journal provide details of my observations of Cycle 2.

There still seems to be difficulty getting mentee weekly reports submitted in a timely fashion. Reviewing initial data is already suggesting need for more structured meeting requirements for participants. Also, perhaps marketing of the study could have been improved since it seems that several participants may view participation as a chore rather than an opportunity. Mentors appear to be enthusiastic to serve.

I have also begun to think that greater success could be achieved if components of the mentoring program were imbedded in course curriculum. This would be fairly easy for the management courses since the capstone class could be structured to facilitate. Initial analysis of data submitted in weekly reports at the conclusion of Cycle 2 suggests that weekly meeting times are too sporadic and some mentees have expressed needing more time with their mentors. Perhaps increased meeting times and more frequent communication with mentors/mentees will be added at the end of Cycle 2.

I am getting the feeling that mandatory participation would be more beneficial to participants if it were imbedded in specific courses as a component of the curriculum. This way, weekly reports would be submitted more timely and those that absolutely refuse to participate could choose an alternative assignment. This would most likely result in 100% participation.

Cycle 2 concluded mid-March. Analysis of Cycle 2 data and subsequent changes to the mentoring study are presented in Table 11.
### Table 11

**Action Research Cycle 2 Analysis and Changes Implemented**

<table>
<thead>
<tr>
<th>Issue Identified</th>
<th>Justification for Action</th>
<th>Instrument(s) used to Identify Issue</th>
<th>Action(s) Implemented for Cycle 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late submission of mentees weekly reports.</td>
<td>Timely reporting is a critical component of Action Research (Mertler, 2012, p. 27)</td>
<td>Weekly reporting form, researcher journal</td>
<td>A mentor weekly survey is created to be completed each week verifying mentee document submission.</td>
</tr>
<tr>
<td>Meetings between mentees and mentors primarily occurred face-to-face at the beginning of Cycle 2. Several mentees noted a desire for more flexibility in mentoring interaction.</td>
<td>Consistent interaction is critical for effective mentoring (Nora &amp; Crisp, 2008).</td>
<td>Weekly reporting form</td>
<td>Students will use alternative methods of interaction to ensure weekly mentoring activities are conducted.</td>
</tr>
<tr>
<td>Logistics and schedule conflicts are creating problems for regular mentor/mentee meeting.</td>
<td>Contact between mentor and mentee is critical for mentoring relationship.</td>
<td>Weekly reporting form, Cycle 2, reflection paper</td>
<td>Mentors and mentees will meet in class for 15 minutes in between their scheduled classes each Tuesday and Thursday. Mentors will contact their mentee on a timely basis.</td>
</tr>
<tr>
<td>Several mentees stated that their mentor did not communicate with them often enough or were hard to reach.</td>
<td>The mentor should frequently reach out to their mentee and initiate contact (Budge, 2006).</td>
<td>Weekly reporting form, reflection paper</td>
<td></td>
</tr>
<tr>
<td>Weekly meeting time shows a reduction in time spent in mentoring relationship (Figure 8)</td>
<td>More time should be spent in mentoring relationship to effectively cover weekly mentoring topics</td>
<td>Weekly reporting form</td>
<td>Encourage more mentoring interaction time between participants.</td>
</tr>
</tbody>
</table>
The majority of the interaction at the beginning of Cycle 2 was in a face-to-face format. In reviewing the weekly reporting information, several participants noted that they were having a difficult time coordinating this weekly interaction. Participants were contacted through email and encouraged to use social media and email. Refer to Figure 7 for an illustration of mentoring interaction during cycle 2.

![Figure 7: Cycle 2 Mentoring Interaction Format](image)

Participant meeting times diminished over the course of Cycle 2. A trend line was added to Figure 8 to illustrate. To address this trend, participants were encouraged to increase the amount of time spent together in their mentoring relationship.
Figure 8: Cycle 2 Weekly Interaction Time

At the beginning of Cycle 2, mentees primarily initiated contact with their mentor as shown in Figure 9. Several mentees expressed concern about the lack of communication with their mentors on their weekly reporting forms. To address, mentors were instructed to contact their mentee at the beginning of each week rather than wait for their mentee to initiate contact. A trend line was added to Figure 9 to illustrate the change.

Figure 9: Cycle 2 Who Initiated Contact
Figure 10, interaction location, illustrates where the mentoring interaction for Cycle 2 took place. This chart supports finding shown in Figure 7, mentoring interaction format, by illustrating that mentoring took place off campus through email/social media, phone, or a combination.

![Figure 10: Cycle 2 Mentoring Interaction Location](image)

**Cycle 3**

Cycle 3, the final action research cycle began mid-March. A group meeting with all participants was held and changes implemented during Cycle 1 and 2 were reviewed. Participants were thanked for their participation and encouraged to continue to submit appropriate documentation. The following observations were recorded in the researcher journal during Cycle 3.

*The final cycle has commenced with changes from Cycle 1 and 2 implemented. It appears many of the issues with coordinating meetings have been resolved. Participants are using a variety of methods to interact. I was a bit naïve in the beginning assuming that meetings*
between participants to engage in mentoring was a given. I can clearly see those who are actively engaged in the study and those who are looking forward to it ending.

As the study nears conclusion, I see many things that I would do differently if repeated. Several things include: more structure and participant accountability. I constantly have to remind participants to submit data in a timely fashion. Perhaps I am having them submit data too frequently, but I need the timely feedback to support action research. I get frustrated every Monday when looking at the data submission box and seeing missing documents.

Reflecting on participants at this stage in the study is interesting. Those I had assumed would benefit the most have not exhibited very much change. Those I assumed would not engage have really shined. I now see the importance of understanding researcher assumptions.

At the beginning of the study, I imagined a “world changing” study on how mentoring would be the cure for poor retention and graduation rates plaguing technical education. I now view mentoring as a piece of a complex puzzle that can be used to alleviate some of the challenges technical college students face. I will elaborate on this in detail in the conclusions and recommendations section.

The study is now in the last week and participants are preparing their final reflection papers. I have mixed emotions at the moment when reflecting back over the past fourteen weeks. I feel proud, frustrated, and relieved at the same time to have completed the study. Now it is time to begin organizing and analyzing the data to interpret results.

Cycle 3 concluded at the end of April. Table 12 identifies recommendations for changes should the study be repeated in the future. These recommendations, along with changes from Cycles 1 and 2 should be implemented at the beginning of future studies.
**Table 12**

*Action Research Cycle 3 Analysis and Changes Recommended for Future Research*

<table>
<thead>
<tr>
<th>Issue Identified</th>
<th>Justification for Action</th>
<th>Instrument(s) used to Identify Issue</th>
<th>Action(s) Suggested for Future Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large week-to-week variation in weekly mentoring time</td>
<td>Increased time in a mentoring relationship is beneficial to the mentee (Jacobi, 1991)</td>
<td>Weekly reporting form</td>
<td>A minimum of one hour weekly mentoring interaction</td>
</tr>
<tr>
<td>Weekly variation of who initiated contact</td>
<td>Mentors as the primary change agent should take the lead in initiating contact with their protégé’ (Nora &amp; Crisp, 2008)</td>
<td>Weekly reporting form</td>
<td>Mentors will be responsible for initiating weekly contact with the mentee and be readily available to assist mentee.</td>
</tr>
<tr>
<td>Lack of structure for weekly mentoring interaction.</td>
<td>Lack of structure reduces mentoring effectiveness (Budge, 2006)</td>
<td>Weekly reporting form, Researcher journal</td>
<td>Scheduled weekly interaction time between the mentor and mentee.</td>
</tr>
<tr>
<td>Lack of emotional and psychological support in mentoring experience.</td>
<td>Emotional and psychological has been identified as primary mentoring experiences (Nora &amp; Crisp, 2008)</td>
<td>Weekly reporting form, Reflection paper</td>
<td>Rework curriculum to ensure emotional and psychological support is included.</td>
</tr>
<tr>
<td>Lack of goals and paths to achieve goals in mentoring experience</td>
<td>Early identification of mentee goals and paths to achieve these goals have been identified as primary mentoring experiences (Nora &amp; Crisp, 2008)</td>
<td>Reflection paper</td>
<td>Include goal identification early in mentoring experience and monitor progress.</td>
</tr>
<tr>
<td>Lack of interaction between study participants (all mentors and mentees).</td>
<td>Paired mentors and mentees did not share experiences with other mentors and mentees (best practices).</td>
<td>Researcher journal</td>
<td>Encourage cross communication among participants to identify what is and is not working in the mentoring relationship. Create a discussion forum for group communication.</td>
</tr>
</tbody>
</table>
During Cycle 3 of the study, participants used various methods for mentoring interaction. In addition to meeting on campus, participants used social media, email, and phone communication to supplement their interaction. It was encouraging to see they used additional methods when face-to-face interaction was not possible. Figure 11 illustrates a stark contrast from Figure 3, Cycle 1 Interaction, perhaps illustrating that mentors and mentees had become comfortable in their relationship, resulting in greater social integration.

Figure 11: Cycle 3 Mentoring Interaction Format

Figure 12 and Figure 4 (p. 94) from cycle 1 show that interaction time remained consistent throughout the course of the study with the exception of Weeks 13 and 14. Possible causes for the reduction were that participants had covered all the required topics and were individually working on their final reflection papers.
Contact between participants was initiated by mentors at the beginning of the study. At the conclusion of the study, mentees were as likely to initiate the contact as their mentors. Possible explanations for the change are that the mentees had become comfortable with their mentors and proactive in meeting the weekly mentoring requirements. My constant email reminders to submit weekly documents also may have had an impact. Refer to Figure 13 for illustration.

Figure 13: Cycle 3 Contact Initiation. This figure illustrates who initiated mentoring contact during the final Action Research Cycle.
Participants began the study meeting primarily on campus as shown in Figure 6 (p.95). During the final action research cycle of the study, Figure 14 illustrates approximately 40% of the mentoring action took place off campus.

![Image: Cycle 3 Interaction Location]

Figure 14: Cycle 3 Interaction Location

**Nine Mentee Experiences**

The following information provides a description of each mentee using information obtained from the pre survey, researcher journal, and reflection reports. Following the participant introduction, information collected from reflection reports provides student’s experiences from participating in the study. Editing of the original data was limited to typographical errors, flow, and cohesiveness with emphasis placed on maintaining integrity of data. Edits to the narrative data are underlined.

**Belinda**

Belinda is a 42 year old African American female. She has completed two semesters of college with the majority of her coursework concentrated in learning support classes. She appeared eager to participate in the study during the initial recruitment meeting. General observations noted about Belinda during the course of the study were she was polite, always on
time to class, and very quiet. She participated in classroom discussions when called upon, but did not volunteer. Belinda’s experience is described in her own words from reflection reports submitted throughout the semester.

Reflection #1. Thus far, participating in the mentor program has had some pros and cons. The pros are that I understand how to really use a lot of useful tools at the school that are free to students. For instance, I learned how to actually use Angel the correct way and how to submit my homework through Angel the correct way. I am also learning how to properly use Banner Web and I am attempting to use Galileo. My mentor mentioned to me to just start practicing in order to really understand how it works. He also told me to go to the library to get more information about Galileo because they have an information sheet explaining how the system works.

The cons of the mentor program are that we are not able to get help with our homework. I feel that if they have already taken the class before then they should be able to help us with that particular subject. It will not be that we are cheating, we are just getting extra help in order to succeed in our career. They should want us to succeed in our career. Also, I feel our mentor should be doing the same thing to help us pass our class and to be successful.

Reflection #2. I think the instructor should already have an agenda and schedule for each day and time for mentor/mentee meetings rather than the mentee or the mentor calling or texting each other to set up a meeting and a time. You have to think about people who have a job. If you have an agenda and a schedule you could go to our employer to let them know in advance of plans for a particular day in order to attend the meeting. I think that at least one of the meetings everyone should meet including the instructor so you can share thoughts on ideas and topic that you think need to be really talked about in order for the mentee to succeed and graduate on time.
Also, if for some reason we cannot meet, then we need to call, text, or email our mentor to talk about the topic of discussion for that week in order to submit your checklist on time.

I think we should at least meet twice a week in order to achieve our thirty minutes to an hour. Some of the discussions or topics we have for that week do not last for thirty minutes. Since in this mentor program I am now setting goals for myself to accomplish and I know that I am going to complete the goals I have set for myself.

Reflection #3. Right now I have the feeling that I am on the right track to succeed in the career I am seeking. I know if I stay on the right track, my career is going to be very successful. As long as I listen to my instructor and my mentor I know I will succeed in my career choice. I can say that at every meeting with my mentor he always asked me, “Are you sure this is the career field you want to be in?” I tell him yes this is what I want to do. He always says, “I just want you to be sure this is what you want to do.”

Allen

Allen is a 27 year old Caucasian male in his second semester working toward a business management degree. He previously completed his computer programming diploma. Allen has been successful thus far maintaining a 3.7 GPA. Researcher’s initial observations of Allen were that he was mature for his age, shy, and very intelligent. Over the course of the semester, Allen was late on several assignments and missed six class meetings contradicting his initial demeanor. Allen’s experiences in the mentoring program are self-described in the narrative below.

Reflection #1. I have been spending a lot of time on campus this semester. I feel like I am very engaged. I have been studying a lot in the library and am a member of two clubs. I am extremely academically confident this semester. I can’t say that it is due so much to the mentoring as it is simply because of my current grades.
I’m pretty satisfied with the mentoring program at this point. I have learned many things about business management from participating. I already knew a lot about the topics on the curriculum since I have been at the school for a while. I knew my assigned mentor from past school experiences and being in clubs. He is now more of a friend and mentor.

Reflection #2. I don’t know what happened mid semester, but I feel like I burned out. I missed some of the work and slacked off. Your email reminders and my mentor pushing me to get my documents turned in motivated me to get back on track. I liked being in the program and it gave me a sense of what to expect if I continue in management. It is different from computer programming. I do feel like this program is geared more for early students and not for seniors. If there is a way to provide more information to students with more experience, I feel it would make the program more viable.

Reflection #3. I feel like I have refocused now that the semester is winding down. I am excited about the summer break. I feel like I am back engaged with my studies. I also feel confident that I can do well in the management courses. They are very different from my past courses and have a lot of work that has to be done on your own. Overall, I feel very satisfied from participating and have learned a lot about the college special services and the student help center, the NET.

Doug

Doug is a 21 year old Caucasian male in his second semester of college. Initially, he was extremely quiet and avoided eye contact when interacting with me or other students. Doug had perfect attendance during the course of the study and submitted all coursework on time. All study documents were also submitted on time. My initial perceptions of Doug were that he would not choose to participate in the study and withdraw due to shyness and interaction
required with his mentor. Surprisingly, Doug’s enthusiasm to participate and observed level of engagement completely nullified my doubts. Of all participants in this study, Doug displayed the highest level of engagement and personal growth. The following are Doug’s words describing his experiences.

**Reflection #1.** For the past five weeks in the peer to peer mentoring program, I have interacted with my mentor in several ways; after class and off campus. My experience so far in the study has been very good. I’ve gotten along with my fellow mentees and got to know a lot of things about them. In other words, my interaction with my mentor has been engaging and I have learned so much about them and their interests.

Through mentoring, I have learned how certain programs work or what is beneficial for me. For example, I asked my mentor how I can check when a semester begins and how I can find out which classes I should take next to fulfill my requirements and she showed me the Degree Works program along with what classes to take. At the moment, I’m very confident about my academic goals and open for any academic ideas provided by my mentor just as long as it's not too complicated.

Finally, I’ve learned to get along better with people who are different from those I am used to being around. I’ve gotten to know my mentor better, have been able to schedule good meeting times, and am able to ask my mentor any questions I have. I would like to see the mentor give the mentee a calendar showing when each semester begins every year at the college and have them answer questions about how the degree program works. So far, I say continue on with the mentoring study because I think it's a genius idea in my opinion because it allows people to get together and form relationships. It helps them learn new things from another’s perspective and also helps them out if they’re struggling in a course with homework or a certain
project. So in other words, it's a wonderful experiment and I think everyone should try it out and if some think it's not for them, then that's alright, we all have our opinions.

**Reflection #2.** I'm getting accustomed to the program now that we are in week six. I'm also talking to my mentor more often than usual. An example would be me asking questions to my mentor about when the summer semester ends and begins and other scheduling issues. My confidence on a scale of 1-10 is a 9 because during the past few days, my mentor asked about career goals. My answer was a paleontologist. Even though my mentor had no idea what I was talking about she still was interested in it. Anyway, my academic level of confidence is good so far because I'm getting used to the college's schedule and am developing a routine.

My satisfaction with the school as a whole is average. We have not spent much time discussing college. My satisfaction from being in the study is mixed. I'm always talking to my mentor about what I'm up to or what is going on at the school such things like that, but at the same time we discuss how my classes are going, what subjects trouble me the most, and what classes I'm taking in the summer. All in all, the benefits are excellent as of now. So far, I do not have any suggestions for changes except for having the mentors ask their mentees to spend more time on career-related topics. Doing this will help build the mentee’s self-confidence and self-esteem by showing the mentees that they are trying to help.

**Reflection #3.** Now that the study is over and I reflect about my engagement, I would say overall, it is excellent. When I began this study, I had doubts about it and felt I wouldn't like it. I also worried that I would revert to my anti-social standards since I usually don’t enjoy talking to other people. I was wrong. The program helped me break free of my own anti-social tendencies and I found I got along with my mentor very easily when at first I had doubts. I
discovered we had things in common and formed a friendship as mentor and mentee. Now, I am not afraid to talk to those different from me.

My level of academic confidence has increased and I am thinking about career choices and what courses will benefit me the most. In the future, I would like to transfer over to Gordon State University. The benefits about the mentoring program are that I was able to socialize with different people regardless of their age and educational background. I was also able to learn from their perspective of how the education process works and gain insight about classes that I'm interested in taking. I would suggest that the mentoring program continue for future students. Others can participate, if they're struggling, regardless of who they are; a student fresh out of high school or someone older coming back to school.

Martha

Martha is a 54 year-old African American female who returned to college in the summer of 2014. She had a GPA of 2.0 at the beginning of the study and admitted life responsibilities had prevented her from performing at her best. She was eager to participate and gain knowledge for success from experienced mentors. Throughout the course of the study, Martha struggled with attendance and submission of assignments. As the study neared completion, Martha revealed she was the primary caregiver for an elderly adult and erratic hours posed problems to her academic success. The following narrative describes Martha’s mentoring experiences.

Reflection #1. I am learning for a project to work, I must put forth the effort. I said yes to participate and must be committed. I hope this project will help me stay focused, in spite of life issues. I feel I am getting information to help me be successful at school and better deal with life issues.
Through the meetings with my mentor, I am seeing that my situation is similar to other students. That being an older student, I learn differently and I need to make adjustments for it. I have discovered that the college has many services and people to help students who need it, but you must say something, they cannot read our minds. There is help for those seeking it.

So far, I am very satisfied with the school. I think they are concerned about student success. I understand by taking business classes, many decisions are made for the greater good. Overall, I have some questions about some of the policies, but I believe the school is doing a good job.

Reflection #2. One thing I like about the mentoring program is networking with others. I have gotten nuggets of information here and there from others and have an outlet to share my thoughts and concerns. I also have found I have things in common with others and enjoy the fellowship and unity.

Currently, I don’t have anything to add or to change. I think it is a good idea. I would like to see it continue and provide benefits to students, particularly new students. For me, I was eager to participate and I believe in finishing projects. I want to be able to learn all I can and how to do things the correct way. By working with my mentor, I have found that I am open to suggestions for improvement. I am glad that there is any resource to help me succeed in continuing my education. To have a person who has experience in what I am trying to do is encouraging.

I am, for the most part, really satisfied with my school. My interactions with everyone have been positive. There are some minor things, but that’s life. You find solutions for it. For parking, just come early.
Reflection #3. Because of being in the study, I have had more contact with other students. It has been a great networking tool. It has given me more information in all areas. I feel more confident of myself, in regard to school. I may take a little longer, but I am confident I will finish the management course with good grades.

The information and activities at the school are helpful. I trust that the staff and instructors are making an effort to help the students succeed. I am very satisfied with my school and believe they want to see the students succeed. The teachers inspire and encourage you to be a better student. Sometimes, it is hard, but in the end, I know it will be worth it.

The study has been an icebreaker experience and helped provide me with confidence. I have noticed I am less shy and more open and friendly with others. It has been a good experience in many ways. I have learned to balance and better manage the many things I have to do. In my opinion, if it could be maintained for 1-2 semesters, it would be beneficial because everyone does not go to orientation. I have enjoyed participating. I have become more open-minded and am able to multitask better. I enjoyed achieving the weekly goals for the study and covering the various weekly topics.

Kim

Kim is a 24 year-old bi-racial female in her first semester of college. During the presentation detailing what the mentoring study entailed, she appeared very enthusiastic about participation. She noted on her pre-survey that she was very nervous and was afraid that she would not understand readings and assignments. She also noted that she had no support system to help if she struggled. Over the course of the semester, Kim’s attendance and submission of assignments declined. She confided that her lack of a support system and life challenges played
a major role in not maintaining regular attendance and timely homework submissions. The following narrative provides details of Kim’s experiences in the mentoring program.

**Reflection #1.** I have liked the program so far. I feel like I am more engaged meeting every week with my mentor. I am normally a shy person but feel like I am growing out of it. I am not quite as nervous around strangers now. I feel more confident being in the mentoring program. Some of the information we cover are things I already knew but some is new. I believe I can perform better in my classes because I have a greater understanding of the various services at the college to help me. This would include using the library, the NET, and different tutoring services. A lot of this was covered during orientation but I lost focus because the process was long.

I like the college. I feel like the mentoring program provides a lot of information about things there to help students succeed. I would say I am more satisfied with my school from being in the program. I believe the college wants to help me pass my courses and have a good career.

The benefits I think I have gotten from the mentoring program are I am not as shy as before and I know more about student support available on campus. I like having a mentor to help me and answer any questions that I may have. We cover what is on the weekly checklist but they always ask me if I have any questions and how I am doing in my classes.

My mentor is very helpful and contacts me several times a week to remind me to turn in reports and asks if I have questions. We have met mostly on campus but have sent emails and texts when we couldn't meet in person. This program should be used by all new students because it gives them good information to help them do well in classes. It would also help new students better understand all of the resources the college offers to help students succeed.
Reflection #2. I can say nothing much has changed from the last reflection. My satisfaction and confidence remain high with the institution. My peer mentor has provided some interesting information on different topics, such as understanding your learning types. As for engagement, I have taken on a work study program in addition to my already full schedule, however, I feel the mentor program has had little to do with that.

The most noticeable improvement to the program thus far was the addition of an online “test” format. Since I can access the required documents for data collection from practically every device I have, it makes it far easier to submit in a timely manner. The only change I would suggest would be to take this idea further with the reflection documents. Since a test can contain essay answers, I think they should follow the same “test” format for the same reasons. It can be accessed and submitted with ease. Other than that, I think the program is becoming a fairly efficient format. Any “gigs” I may have are due to my own failures with time management. I look forward to reviewing the data at the end of the program.

My student engagement has fallen when compared to my first week of school. When I first began the study I expected, more of a tutoring program that reached beyond just helping with homework. I realized that the mentors only helped with what was provided in the guidelines of what was supposed to be discussed during that week.

Reflection #3. To be very honest for this study, this study did not improve my academic confidence at all. What could have helped would have been a mentor that could help me in classes that I did not understand. This program did not change how I feel about my school. I understand with this new study it is meant to help students, however in my case it did not change how I feel about the school. I got to meet new people, and I did learn a little more about banner web than I did before.
Before pairing mentors and mentees together, have a social gathering so that they may be able to get to know one another prior to work together. I understand the goals for this study but at the same time if a mentor is to help mentor us in our programs, then I feel that a lot more time should be spent by mentors to actually serve the mentees needs. Spending time on specific mentee classes that they have taken would be helpful by sharing best practices. In addition to providing more time for mentees and mentors to get to know each other, pairing should be by needs rather than random.

Sherri

Sherri is a 44 year-old Caucasian female in her first semester of college in a degree program. Sherri was enthusiastic about participating in the study. She attended the college ten year’s prior taking adult education classes in basic reading and writing in preparation for completing her GED. In addition to participating in the mentoring program, Sheri also met with college tutors to obtain help with assignments and proofreading of her work. Sherri maintained perfect attendance during the course and submitted all assignments on time. Her writing and comprehension skills showed substantial improvement over the course of the study. The following provides a narrative of Sherri’s experiences while participating in the study.

Reflection #1. So far, it is very fun and if the meetings will continue throughout the course, it would be great. Contact with my mentor has occasionally been a problem. Sometimes it takes a while for him to contact me. It seems to go well for a while but then contact stops. Once we make contact, things go well. I have found that if my mentor doesn’t make regular contact, I am missing out on opportunities for learning. I feel it would be helpful if we spent more time together. Unfortunately, timing isn’t on some of the mentor’s list of priorities. Because of this, I feel that I have not benefitted very much from mentoring. I have been getting
more help from the NET rather than my mentor. A fellow classmate has also helped me a lot too. I would like to keep going in the mentor program but I feel that the NET is more helpful at the moment. If I have question they are there to help me.

Reflection #2. My mentor does not communicate with me often enough. I would like to see them more than one or two times per week. I feel that to be successful in the mentoring program, the mentor has to be readily available to help their mentee. If a mentor does not have the time to devote to their mentee, perhaps they should not participate as a mentor. I believe communication is the key to a successful mentoring relationship. Being able to ask questions really helps me. Mid-way through the program, sometimes I only see my mentor in the halls or at the library.

Reflection #3. Things are getting better since you assigned me a new mentor. She comes by the class every Tuesday now and reviews the items on the mentoring sheet and answers any questions I have. She also provides information on things I do can to improve my grades. It is also helpful that my new mentor is a work study student and can always be found on campus. I wish I had her from the start. Between her and the NET, I have feel I have had a successful semester. I will most likely make B’s in all my classes.

After completing the program, there are several suggestions for future attempts. I think the idea of students having a mentor is a good but pairing with the right mentor for success is the key. My first mentor did not spend enough time providing mentoring. I am probably needy but I really want to do well. I have been out of school for quite a while and it is important that I accomplish my goals in a timely manner. If this study is repeated, I would suggest you ensure mentors are readily available to work with their mentee and devote adequate time to the
relationship. It would also be useful if the mentor would assist with assignments mentees are working on.

Kathy

Kathy is a 20 year-old Caucasian female in her fourth semester of college. She originally started in Web Applications Development and encountered struggles resulting in a 1.77 GPA. Kathy agreed to participate in the mentoring study and noted on her pre-survey that she doesn’t study enough and gets easily distracted. She also stated she starts the semester with the best intentions, but begins neglecting her assignments midway through the semester. She hopes that participating in this study will keep her motivated for the duration of the semester. The following narrative describes Kathy’s experiences in the mentoring study.

Reflection #1. My engagement with this study so far has been good. If we don’t meet at school, we will email or talk on the phone. The group meetings we have had are fun. I like seeing how everyone in the group is doing. It is good having a mentor to help me when I get confused or nervous about doing well in class. I feel like my confidence is increasing. I can ask my mentor if I am confused on something and I don’t worry nearly as much as before. My homework and test scores have been okay this semester. I don’t know if it is because of having a mentor but I don’t stress as much having the additional support.

I like the school but think we pay too many fees. My mentor talked about different activities and resources available for students that I didn’t know about. This will be useful when attempting math because I can get tutoring.

The benefits from participating in this program thus far are increased confidence by having someone support me and answer questions. I also feel like interpersonal skills are getting improving too. I don’t feel as shy when interacting with others. The only change I
recommend would be making it easier to turn in weekly documentation and perhaps submit documents on a bi-weekly basis. Additionally, a reminder system to submit documents would be useful in improving timely submissions. Overall, I like the program so far. I did not perform very well at a previous school and wonder if it would have been different if they had a program like this. Thus far, I have learned a lot about the college, clubs, and programs offered to help students succeed thanks to my mentor.

Reflection #2. There are several things to share about the study thus far. First, I've gone to all but one of the meetings with my mentor, and done the assignments (though I'm late with them on occasion). Secondly, my overall level of confidence hasn’t really changed too much; I tend to know about the items we discuss in the meetings, such as Angel, Banner Web, etc. Something that has improved, however, is my confidence in math, as I occasionally help my mentor with her work. So far, I am satisfied with the experiment, though I'm still fairly apathetic about the school itself. I'm glad that someone is taking an interest in technical college students.

Reflection #3. After participating in this study, the greatest perceived benefit would be that I've made a friend that I can talk to when I need advice. This is great for me because I'm not exactly the most social person. The only changes that I would suggest would be to offer different topics for students to discuss if they are already familiar with many of the topics on the list. For the first year students, however, the topics are probably just fine.

I'm still not really sure what's meant by student engagement, but I have found this study to be a useful and positive experience, as I've gained a friend and mentor. I feel like my academic confidence has gone up slightly. I've successfully completed another semester, proving to myself that I can do it. Also, I have increased my confidence in math from helping my mentor with her math. I much more satisfied with the school after this study because it's being
conducted to help technical college students succeed. I've gained more information because of this study compared to new student orientation. As an example, my mentor has shared information with me about scholarships that are available, as well as a program managed by the special populations staff that lends textbooks to students for free.

As far as benefits go, like I said, I've gained a friend and valuable information. I think the only changes I would like to see would be different “scripts”—the weekly lists that the mentors have--for students. I would love for this mentoring program to be available each semester and pair an experienced student with an inexperienced student. I think it may help with retention and would likely increase people's understanding and happiness at the school. I know personally, if I had had a mentor in my first semester, I would have been more comfortable and probably made friends quicker.

Sharon

Sharon is a 32 year-old Caucasian female in her third semester of business management. Sharon decided to return to school when all of her children were old enough to begin elementary school. Sharon has maintained a 3.0 GPA, but admitted that juggling school and family responsibilities was challenging. She was excited to participate in the mentoring study and expressed that it gave her additional tools to help her reach her goal of graduating. The following narrative provides details of Sharon’s experiences.

Reflection #1. I really like having a mentor that makes an effort to meet and ensures that you understand what is taking place at the school and shares experience through courses they have taken. If I don't understand school work, he is always able to help me with it. I feel that being in this mentor program has motivated me to perform better and to focus on what I need to do in order to accomplish my career goals. For example, my grandma died two days after
school started. My mentor called to make sure I was alright and encouraged me to remain focused. Also, when we meet on campus or meet by phone, any questions I have, he answers and makes sure I understand. I feel that this program has helped me in building self-confidence and has gotten me to a point to where on a personal level, I believe that I can do whatever I need to do and not feel like I’m a dummy.

My academic confidence thus far has increased. Through discussing the courses that I have taken and the ones that are best for me to take to succeed in being a good leader in management, I have a better understanding of the goals I need to accomplish. As far as my academic confidence from this mentoring experiment, it has increased my level of confidence. I now feel that I can accomplish whatever I need to in order to succeed. I feel that I am no longer incapable of achievement. By being able to talk to my mentor about school projects and school events, he has shown me that I don’t have to be stressed out over a “B” and that the more I stress, the less work I accomplish.

Reflection #2. Several things have happened since beginning the mentoring program. (1) I am now participating in school activities and (2) I joined the National Technical Honors Society. After beginning this program, my mentor encouraged me to do so and has shown me the various programs the college offers as well as workshops to help one improve. I am satisfied with my college.

My mentor and I usually meet in the library. It is a quiet place that you can have a conversation or look over your work and without a lot of distractions. Sometimes, we just walk around campus discussing what is going on at school. He tells me many things and is always asking if I understand everything we cover. He has taken all the classes that I am taking now in
Business Management, so it is easier to communicate knowing that he understands what I am talking about.

I hope that after this experiment, the mentoring program will be offered for others at the college. I feel that the students who are new and don't know anyone would appreciate having someone to help them understand what's going on and to help them get on the right track to accomplishing any goals that they have set and be successful. I feel that it would boost the rate of graduates and students enrolling instead of students withdrawing or not wanting to continue because they feel like they're attempting it alone.

My mentor and I meet every week on Tuesdays. I feel that it benefits me by having someone to help me with school work that I don't understand and share information about activities that the school is holding. I feel that participating in this mentoring experiment has helped reduce my level of stress regarding schoolwork that I don't understand and stress about meeting course deadlines.

Reflection #3. I feel that this experiment has been beneficial by instilling confidence that I can succeed and achieve my goal of graduating. Previously, I was stressed out about the school work load and the classes I was taking. Thanks to my mentor, I feel that I am able to confidently complete them now. Participating in this program has encouraged me to interact with other students that are needing help with their school work or assist them with any questions they have about the school.

I don't see any changes that need to be made to the program. I am very optimistic that this experiment will be successful. It has helped me learn that I don't have to do it by myself. It has been beneficial by providing information about college events, clubs, and different formats needed for reports or presentations. My personal thoughts on this experiment are that I am
thankful that I was able to participate. If I chose not to participate, I wouldn't have the level of self-confidence that I have now.

Davis

Davis is a 36 year-old Caucasian male in his fifth semester at the college with a 2.7 GPA. Davis is a programming major who took the business management course to fulfill an elective requirement. Davis is active in school activities and very knowledgeable in computer software and technical support. He was initially reluctant to participate as a mentee, but noted that he would like to improve his time management and organizational skills, areas that have caused him trouble in the past. The following narrative provides details of Davis’ experiences in the mentoring study.

Reflection #1. I’m afraid that, so far, I can’t say I’ve been an ideal candidate for such a study. I began this with the idea that anyone can teach you something. My experience with the program has shown me very little. I think it’s because my mentor and I are essentially on the same “level” if I may use that term.

Before the program, I have been involved and currently still am involved in several clubs and programs. I am a state officer and mentor myself for the school. Many of the topics of discussion I’ve learned early on in my time with the school. Academically, I’m in my 5th semester so many of the topics are nothing new though admittedly I did get some information out of my meetings (GPA calculations on Degree Works).

I already have my goals and academic plans organized and they have essentially been reinforced by my mentor so if anything it simply gave a bit of a confidence boost to my decisions. I will give my opinion on the direction I think the program should take. As a student outside the business program, I found some of the topics unnecessary. For instance, the inclusion of a
discussion on the business program did not seem necessary. My one business class is a requirement for my degree and while I'm sure it's the opinion of some that more is better, it's something that simply put does not apply to me at this point in time. I think the student's goals should be taken into consideration when approaching topics. A mentor, in my opinion, should build on the goals of the student, not the goals of the mentee or the program.

Additionally, the level of experience should be considered when assigning the mentors. I appreciate my mentor's time however we both agree that there seems little to be gained given our similar experience. I feel I am wasting her time more than she is assisting me. Her talents would no doubt better suit a more novice student. I still believe that anyone can teach someone something new, but I do believe that it's important to recognize the level of impact a mentee may have on a particular student.

Reflection #2. Reaching week 9, I can say nothing much has changed from the last reflection. My satisfaction and confidence remain high with the institution. My peer mentor has provided some interesting reviews such as the learning types. As for engagement, I have taken on a work study program in addition to my already full schedule, however, I feel the mentor program has had little to do with that.

The greatest change to the program was the addition of an online “test” format. Since I can access from practically every device I have, it makes it far easier to submit in a timely manner. If I had any changes to suggest, it would be to take this idea further with the reflection documents. Since a test can contain essay answers, I think they should follow the same test format for the same reasons. It can be accessed and submitted with ease. Other than that, I think the program is growing into a fairly efficient format. Any “gigs” I may have are due to my own failures with time management. I look forward to reviewing the data at the end of the program.
Reflection #3. In the final reflection, I can finally say that I gleaned a lot more info further along in the program which, in hindsight, makes sense considering my length of time at the school. Academically I feel fairly confident. My student involvement hasn’t changed drastically since I started the program however my approach to prioritizing my time has. My mentor is a full time, dual major, mother and work study and is able to keep track of everything. Listening to her opinions on time management has made me realize that I need to look at why I myself feel so overwhelmed. I mean all in all we’re very similar but I’m not a mother or wife so something must be awry.

In that, I’ve shifted my attention to more time sensitive organizations. Class and work study of course, but then my clubs keep a tighter schedule than my peer mentoring. As such, I have reduced my time in the NET to zero and made my availability by appointment only. This has certainly given me more time during the day (especially considering my specialty is Computer Science and there isn’t a high demand for that). It’s still not perfect but I feel that it’s something that will get better with time.

Moving on to the leadership portion of the program, I must say I was a bit surprised. I found that I’m probably more democratic and involved with my employees that I realized. As stringent and militant as I think I am as an employer, it seems that much of my leadership style revolves around allowing a lot of freedom to my employees before stepping in. I retain my authority but use it only when necessary or when important decisions must be made. It was eye opening to say the least.

Being in this program, along with all my other programs, I must say that I become less enamored by this school but only in the policies it carries. With all the power empowerment this program has revealed to me, it seems that in this particular institution, that power is extremely
limited. Even in my position as a student government officer both for the school and the state, I feel extremely restricted and removed from the impactful decisions that other colleges allow their students to make. It mirrors grade school in that there is student government but ultimately it does little in the grand scheme of things. I believe this may be a major reason as to the decline in enrollment and attendance. Quite frankly if not for my instructors and advisors, I may have considered transferring. I'm certain there are students here who have not grown up and accepted the responsibility of adulthood but honestly that is their issue and should be dealt with accordingly. As it is, the school seems to be holding all students to the lowest common denominator which is killing the experience for those of us who care and really only permitting such base behavior to continue.

So there you go. I know it seems I've gone off subject but au contraire after gaining some insight into my own place as a student both with SSLC but more importantly with a senior student, I came to these realizations. So if I had to say how the program was? Again aside from my own lack of efficient time management, it's great as is. I thought I would gain little but it turns out I picked up quite a bit.

**Mentor Experiences**

There were five mentors who participated in this study. Mentors received training on using the mentoring training curriculum (see Appendix H) prior to commencement of the study. Each participant was either in his/her final or next to last semester of completing the Associates of Applied Science degree. Mentors submitted reflection reports at the end of each action research cycle. A mentor weekly report was incorporated during week 7 to provide additional details of the mentor’s experience. The following introductions of the mentors were created using information recorded in the researcher journal, my past interactions with the mentor, and
reflection reports. Following the introduction, pertinent information identified from reflection reports is presented in the mentors’ own words. No editing of the mentor’s narrative data was performed. As with the mentees, mentor names’ were changed to protect identity.

**Teresa**

Teresa, a 42 year-old African American female, was in her last semester of completing her AAS degree when she participated in the study. During the study, she was enrolled in six courses and worked twenty hours per week at the college as a work-study student. Teresa finished her coursework with a 4.0 GPA. She noted that she had attempted college fifteen years prior, but did poorly. Despite her busy schedule, she was eager to participate and share her experiences with her mentees to help them succeed. The following narrative provides details of Teresa’s experiences serving as a study mentor.

**Reflection #1.** I have mixed feelings regarding being a mentor for this research study. The best part of being a mentor is I can give advice and guidance to the mentee. I enjoy talking to the mentees about what general information they may have on different topics. I want to know which topics they need and want information on for an enhanced understanding. I enjoy helping and working with others in any way I can, because it is very rewarding to me. I also enjoy learning information that I was not aware of from my mentees.

The opportunity of meeting new people and being able to discuss different topics to enhance their knowledge and mine as well, is great. I feel the introduction part, which is the initial commitment, the sign up, to the research and the meet and greet are a great start. Having all parties involved in their parts, is not working out to well. When the mentees do not respond back to my emails or show up to scheduled face-to-face meetings, it is hard for me to do what I'm supposed to do efficiently. It can be a little frustrating for me at times because I'm offering up
my time to reach out and I get nothing back. I must say the first couple of weeks it was better, I had interaction with my mentees but I'm not sure if their coursework load or life itself is interfering. I have a full load and I'm dedicated to whatever task I take on. I know not everyone has the same mindset. I did not always have it myself.

I am not sure at the time what can be done differently to make sure everyone who signed on for the research stays committed and do what they are supposed to due by the scheduled due date since we already have different types of communication between mentor and mentee (call, text, email, or face-to-face). The weekly checklists are not difficult or require much so I do not see a need for a change.

Reflection #2. My feelings regarding being a mentor for this research study are no longer mixed. I am more enthusiastic about being a mentor lately because my mentees check in on a regular basis. I still believe the best part about being a mentor is I can give advice and guidance to the mentee. The following information in this paragraph are my original thoughts as I reported in the first reflection report: I enjoy talking to the mentees about what general information they may have on different topics. I want to know, which topics they need and want information on for an enhanced understanding. I enjoy helping and working with others in any way I can, because it is very rewarding to me. I also enjoy learning information that I was not aware of from my mentees.

Reflection #3. The opportunity of meeting new people and being able to discuss different topics to enhance their knowledge and mine as well is great. Having all parties involved in their parts has worked out a lot better since I last reported. When I see my mentees come into the office for a visit it makes me smile, I have no complaints. My two mentees make it a point to stop by for weekly visits, no matter their busy schedule. I am not sure what motivated the change, I
wish I could say it was my charm and personality (I think it was that), I am just happy there is face to face communication between us at this time. I think making the weekly checklist more accessible and convenient saved a lot of time for all parties.

The following are some factors that should be considered for the future: I think it is important to ask all parties involved if they have a preference so they can be more comfortable with their mentors or mentees. Some females may not be comfortable with males or vice versa. Some participants may have jealous loved ones at home whom may not approve of their significant others talking to the opposite sex on a one-on-one basis. These types of questions can be present in the pre-survey and then the pairing can be generated accordingly.

Randy

Randy is a 60 year-old African American male who retired from the US Army. Randy returned to school to obtain his AAS degree with the intention of obtaining employment with the federal government. Randy spent much of his military service as a recruiter. This experience and his maturity made him a natural candidate to mentor inexperienced students. Randy provided the following narrative of his experiences as a mentor.

Reflection #1. I think this is good worthwhile program. I have seen the program work in another environment. Some changes I see would be the matching of mentee and mentor course time schedule. If mentor and mentee have classes and time scheduling that match, try to pair them together, thus creating a sort of doubling environment for both.

I feel that the program is working best with the ones that has smaller time conflicts. If the mentee and mentor have somewhat of time conflict it may be a struggle for them both to meet. This is the only issue I see right now. The program is new and I see it as just that, a new program. I see an interest in individuals wanting this program. As news of the program makes
it way around school, it will pick up steam and interest. This is not a norm or as popular as some of the clubs at the school. It is more of an academic program. It will grow but not as quickly as the instant sports of other student programs.

I like and enjoy serving in the program. I sat in many classes and you can see a need for mentors to talk with and share all type of ideas with other students. As the students leave high school and enter college there is a change that one will go thru. The mentoring program is a very good fit to help them. It can help that high school graduate to mature and assist them in the new “real world environment.”

Reflection #2. I still think this is good worthwhile program. It is not an instant type success program but one that can improve with tweaks and changes and will improve success rates of students. Some changes I still would like to see would be the matching of mentee and mentor course time schedule. If mentor and mentee had classes and time scheduling that match try to pair them together thus creating an easier environment for both to meet. At the beginning of the course set meeting times for the 1st half of the program then adjust based on attendance but maintain a meeting schedule if needed by explaining this is the way the program will be ran. If the mentee and mentor have of time conflicts it may be a struggle for the both. Also, continue to meet in the classroom. This really helps by providing a schedule for both and a place to meet on a regular basis.

Reflection #3. For my final report, I want to say I have enjoyed the program. It is new and had a few bumps but I see it as something that can help if people really want to take advantage of it. I hope it will continue so students can meet, talk and share ideas. Many of the young people in college today need a program like this.
The only change I see to help the program would be to make it so students time schedules are better. After we started meeting between classes, it seemed to get better. I liked my mentee. She was nice to work with and I enjoyed being able to tell her about things I have done to be successful. It was hard going back to school after retiring and a program like this would have helped me. It would be helpful for young and old students. I am always interested in another person’s view and what their thoughts, beliefs, and ideas are. I learned a few things from my mentee also.

Thomas

Thomas is a 32 year-old Caucasian male and veteran of the US Army. Thomas completed his diploma in welding and decided to obtain his business management degree in order to successfully operate his own welding business. Interaction with Thomas was positive. He displayed a strong work ethic and leadership skills in the classroom. He eagerly agreed to participate in the study as a mentor. The following narrative details Thomas’ experiences serving as a mentor.

Reflection #1. I believe that this study has been very beneficial to those students who can truly use the information that is provided. With one of my mentee’s, the information I have provided has been very beneficial since she is new to Southern Crescent. However, the other has been a student for a while now and some of the information that I can provide is of little use.

Some changes that I feel would be very beneficial would be to place the Angel and Banner Web training to the first two weeks. Learning how to navigate and use Angel is crucial to the success of a new student so I believe it should be placed even before scholarship and financial aid information. While that information is very important it cannot truly be used until the next semester. Also, another thing that may be helpful would be to try to find possible
mentees who are brand new to the college and not only to the business management curriculum since some students have had the experience of college and have simply transferred to business management or require a business management course for their current program.

**Reflection #2.** The weekly meetings seem to be working well and the information that is required is able to be explained in the normal amount of time required by the study. The curriculum that has been devised seems to be beneficial to the mentees, which is good since that is the major goal.

Scheduling has been something of a problem. Not only does everyone have classes they must attend but they may also work which creates another problem all its own. I think it would be beneficial to have each mentor and mentee write down a schedule and instead of pairing randomly, pair them based upon their schedule. This would help alleviate scheduling issues.

Aside from some kinks here and there I believe this study is very beneficial and rewarding, not only to the mentee but also to the mentor. Though there have been issues such as not being able to reach the mentee or interact effectively at times, this has shown us that there are many other ways to communicate and share knowledge such as through email conversation and attaching sites or documents that can be even more beneficial than your discussion.

The mentees seem to be very receptive and the information is very helpful to them. Much of the information is stuff that I did not know when I first started here at the college and would have greatly benefited me. Considering that the information is great and useful, the only thing that isn't really working is our schedules.

**Reflection #3.** Serving as a mentor has presented some challenges. It has been difficult to meet the mentee and hard to stay motivated and engaged with the mentor-mentee relationship because of schedule conflicts and other issues. It has been rewarding as well though. The study
imparts a lot of useful information to the mentee and allows the mentor to grow in the process. A major hindrance to the program is each student's difficult schedules, considering that many work or have other goals they must accomplish as well. Having a set time would greatly alleviate this problem.

Having mentors and mentees meet in the class was a very good improvement. The program itself also has very good information for students that can help them adjust to college life and grow as students. Many of the issues that we had previously were addressed and corrected. Better than meeting in the class for a few minutes though would be to have specific times already set with a gap between classes to allow for the meeting between each group of classes. If some kind of system to meet each week was implemented, even just in the class for a few minutes, at the beginning of the study then it would set the norm to meeting at these times allowing each student a more rigid schedule to help them plan their busy day. While perhaps needing some improvement I believe this research study has been very beneficial to both the mentors and the mentees.

Sara

Sara is a 48 year-old African American female with 20 years’ experience in the banking industry. Sara returned to school after losing her job during the economic downturn. She was slightly apprehensive about succeeding since she had been out of the classroom for such a long period of time. She successfully completed the majority of her courses and had a renewed level of confidence in her ability to succeed and stated she had a “thirst” for knowledge. When offered the opportunity to serve as a mentor, Sara did not hesitate to participate. Sara’s experiences are highlighted in the narrative below.
**Reflection #1.** This program was designed to not only help current students in college, but the mentor as well. I say this because it actually helps me to explain what all the college has to offer. It also strengthens our weaknesses and we the mentor and the mentee can learn a lot about each other’s study habit, groups, and clubs. I personally learned that it is a benefit to join various organizations within the college to enhance your resume and degree outlook.

One of the changes I would like to see is allowing the mentor to meet with the mentee outside of campus. What I mean by this is we are overwhelmed by studying, classes, and what we are dealing with in our own personal lives. I feel to allow us to meet over coffee, lunch, or dinner outside will really relax us to better communicate with each other. I feel that outside the campus will allow us to really get to know each other and communication would be better.

What I feel is working in the mentor relationship is the resources that the college has to offer. My mentee did not know about the Lending Library, a resource to help with book cost. The one on one, face to face communication works well. The mentees knowing they have someone on their level they can communicate with works well. Some mentees prefer to talk with someone that is going through the same things they are as opposed to an advisor.

What I feel is not working is the deadline for communication. The reason being, if you cannot get your mentee together at the same time it poses a problem. You may meet with one on Tuesday and the other on another day. I also feel that maybe clarity about the program to the mentee and mentor will be helpful. This needs to be done with both sides and it needs to be understood what this program is all about and it has a deadline much like your assignments.

**Reflection #2.** This research program will be a success once we as mentor and mentee understand through the program we can help each other and future students who would like to further their education. I feel I am making a difference in my mentee’s life. I have noticed I am
making a difference by the feedback I receive from my mentee. In today's society, our challenges are hard in our personal, academic, and spiritual lives. This program has really showed me that we as mentors are needed to assist others. I have always wanted to help others and to see others succeed. I feel I am doing just that. I learn that asking questions outside of our weekly responsibilities allows the mentee to converse more. This program allows me to get to know my mentee on a personal level.

I feel that our athletes at the college should be required to enroll in this program. The students in the sports program really need to consider this program for guidance, help, information, and assistance. This will allow the mentee to display the college’s standards, ethics, and codes they need to follow.

The weekly responsibility is a wonderful guide to follow, it helps you to discuss what the mentee or mentors may not know. In the following weeks discussing the ten college work ethics is so important. Although it is posted in the school, many students really do not read the information posted. The guide allows the mentee to refresh their knowledge and do additional research to convey to their mentee's.

Reflection #3. I have enjoyed my time being a mentor to my mentees. This program will work and has worked. It allowed me to share not only academic information, but personal information. It allowed us to really get to know one another on a totally different level. The format we followed was well thought out and helped to ask and answer questions the mentee may have wanted to ask. This program will work if both parties participate with the weekly meetings.

Some of the changes I would suggest is: combine the program for new enrolling students, and a different curriculum for current students, allow students to meet off campus at a restaurant or coffee shop this may make it more exciting to want to meet, a small token of appreciation on
the behalf of mentee from mentor when program has ended, collect a small token to take mentee
and mentor to a dinner or relaxing environment. I would involve the dean or president of the
school because some students have yet to know who they are. Include a tour of the entire school
campus. This should be a class for new students to take to help them adjust to college life.

I feel what worked well in this program was the continual communication. I feel that
through this program mentee's confidence, study and college experience has improved in this
program. The mentee's knowing that what they are going through each student has experienced
in some shape, form or fashioned.

I know without a doubt, this program would help others in continuing their education
here or any college. It taught me that I can make a difference in a student’s college life. It
really felt good committing my time and knowledge to help someone else. I truly feel that
through this program you can meet friends or nurture a young individual and that would last a
lifetime. I enjoyed my mentees and really got to see a different part of God's everlasting
rainbow. This is the reason why we are all different to make up the universe.

My additional thought regarding serving as a mentor in this research program is it
should be ongoing. This is a program I foresee working to benefit any student that is enrolled in
a certificate or degree program. This program will work as long as the mentee and mentor
apply themselves and follow the guidelines in place.

Charles

Charles is a 30 year-old Caucasian male with multiple diplomas and degrees. He
completed his business management degree in the semester the study was conducted. His other
credentials include a diploma in cosmetology and a degree in culinary arts. His extensive
knowledge of the inner-workings of the college and successful completion of another program
made him an ideal candidate to serve as a mentor. Charles was excited to participate and shared tips for success to those beginning their college career. The following narrative details Charles’ experiences as a mentor.

Reflection #1. On the first day of this semester, I decided to become a peer to peer mentor. Upon signing the required forms, my intent was to have another extracurricular for my resume that would look very good in my favor. After the first meeting however, I realized how much students just enrolling in our college or on their beginning semesters do not know about the school. It seems that our orientation process is lacking and truly is not giving students the information they need to succeed. I think this community will be very beneficial not only to the Business Management program, but others as well. They are not being told about clubs and other activities at the school, nor are they encouraged to attend a library orientation. No one is instructing them on how to use Galileo, and many do not know about the NET program housed at the medical building or what it involves.

Scheduling of meetings and the flexibility of mentors is one thing I see that needs changing. Mentors need to be instructed that they need to be flexible towards students schedules, and not just up and schedule appointments on their time only. I do have personal experience in seeing this happen. Mentors aren't consulting their mentees as to when they have time to meet. It's on their time, not ours as mentors. There need to be some sort of accountability code enacted for mentors who do not act according to their intended roles.

Reflection #2. In the mentor mentee relationship, I do see students who may not normally interact with each other doing so. Alternately, I do see some personality conflicts going on, meaning not all mentees are connecting with all mentors. This may pose a problem,
meaning communication interference may result, and the mentee not be benefiting from this program.

Personally, I would like to see more students signing up for the program. I would also like to see more qualified mentors signing up as well, and not just for how it will look on their resumes. We are supposed to be there as a help for mentees not ourselves. This could be one of the best moves any faculty or staff member has made during my time enrolled in our school.

This study so far has been interesting to say the least. Throughout the study, I have noticed the amount of dedication some students have for their education. Also, I have noticed a lack of dedication, myself included, to extracurricular activities. Some are finding trouble incorporating extra activities into their daily educational and personal lives. If meetings aren't done on campus, some aren't picking up phones to receive weekly calls. School scheduling is also impeding meetings that need to be done. Mentors aren't in control of these factors.

Reflection #3. School scheduling has been the major issue for me. As far as changes, I don't know what changes need to be made. You can't make the mentees pick up their phone, if they didn't meet on campus. For my mentee, I do talk to her on a daily or every other day basis. I have tried to create some sort of friendship/relationship with her.

This study has been quite eye opening, as well as, nothing unusual at the same time. I quickly realized who was committed and who wasn't. This study would run better with a group more committed to the cause if you will. It isn't easy for many college students to take on extra responsibilities, and this can be seen in the ones who join clubs and just stop going. As far as changes go, I do not know what to suggest. I do know this sort of group is better suited for first semester students. The weekly checklists are a good idea, but getting people to fill them out and submit them is another story. As the old saying goes, you can lead a horse to water, but cannot
make them drink. This was never so apparent, as it was during this study. The underlying premise of the study is good, but the implementation is tricky. You have to have the people to complete what they are supposed to in order for it to run smoothly. I do think this was a good trial run though. It let us see what is going on, and what needs to be done in the program to help students out before they graduate.

Conclusion

Participant narratives from the mentoring study provide details of both mentee and mentor experiences as they progressed throughout the semester. The information was a critical component in the implementation of changes at the end of each action research cycle and provided support in answering the research questions as well recommendations for future researchers and implications for technical colleges. The following chapter will address the six research questions regarding peer-to-peer mentoring in technical education.
CHAPTER 5

PEER-TO-PEER MENTORING: FINDINGS FROM THIS RESEARCH

Chapter 4 provided the experiences of participants, both mentor and mentee, along with my experience conducting action research. The intent was to provide the reader with insight into how the study was conducted and student perceptions as mentee or mentor participants. The purpose of this chapter is to present study findings answering the following research questions.

1. Does a peer-to-peer mentoring program increase student engagement?
2. Does a peer-to-peer mentoring program increase students' academic confidence?
3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?
4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?

Answers to the research questions were obtained using inductive and deductive reasoning. Inductive reasoning is typically used in qualitative studies. Use of both approaches has been found to be complementary in research and is often needed to illuminate qualitative findings (Blackstone, 2012). Due to the nature of the research questions, instruments, and testing of the conceptual model proposed in Chapter 1, both approaches were appropriate for analysis of data.
The inductive reasoning process includes the following steps: researcher observations, identification of patterns, creation of a hypothesis, and culminating with general conclusions and theories (Mertler, 2012). The primary purpose for choosing to use inductive reasoning was to allow for the emergence of frequent themes in narrative participant data submitted in reflection reports at the conclusion of each action research study. This process, in turn, allowed for the formulation of general conclusions to answer each research question.

Deductive reasoning is typically used in analysis of quantitative data and testing of existing theories. The deductive reasoning process includes the following steps: choose a theory, narrow the theory to a specific hypothesis, collect data, analyze data and confirm or reject hypothesis (Mertler, 2012). For this study, descriptive statistics were used to analyze pre and post survey questions and weekly reports of numeric data to determine time spent in the mentoring relationship, how meetings took place, and who initiated contact. In addition to providing answers to the research questions, the data also provided insight about what was and not working in the mentoring study, and allowed me to facilitate change, a core tenant of action research (Mertler, 2012).

Action research was chosen primarily to allow me, the instructor, to gain a deeper understanding of my students, my practices, and measure the effects of a mentoring program grounded in three theories addressing student persistence; social and academic integration (Tinto, 1975), physical and psychological involvement (Astin, 1984), and perceptions and behavioral involvement (Berger & Milem, 1999). Action research allows the systematic inquiry by those vested in teaching and learning, whether teacher or administrator, to gain greater insight about how education is conducted and how students learn (Mills, 2003).
Data Collection

Numerous instruments were used to ascertain data throughout the course of the study, both qualitative and quantitative. The instruments were multi-purpose and designed to guide me as the action researcher and also provide answers to the research questions. The instruments used to specifically answer the research questions were the pre and post surveys and reflection reports. The pre and post surveys required participants to numerically rate and narratively describe their level of engagement, academic confidence, and institutional satisfaction. A beginning and ending value was measured using descriptive statistics. Three reflection papers were submitted by participants at various intervals during the study. Students reflected on their level of engagement, academic confidence, and institutional satisfaction.

To enhance credibility of the data and provide as accurate a picture as possible when reporting findings for research questions 1-3, triangulation of data methods was used. According to Krefting (1991), this is a common method for data analysis and triangulation and combines both quantitative and qualitative approaches to study the same phenomena. Triangulation or use of multiple data sources lend credence to research by illustrating how findings from various instruments agree with, rather than contradict each other (Mertler, 2012). Figure 15 illustrates the instruments used for triangulation of data.
The majority of data collected during the study consisted of narrative data. All narrative data was transferred into Microsoft Word documents before being uploaded into QDA Miner Lite, a software analysis program used for qualitative data. Narrative data was read on two separate occasions prior to the development of a coding scheme for grouping similar types of information into categories. The initial coding scheme contained forty various codes. In order to refine and reduce the volume of information, redundant codes were reduced to specifically address the research questions and perceptions of the mentoring study. These codes were then categorized under seven major themes that emerged during analysis: mentoring, student engagement, academic confidence, institutional satisfaction, time, goal attainment, and doubt/apprehension. While the research questions focus on mentoring’s effect on technical college student’s engagement, academic confidence, and institutional satisfaction, the additional
categories or themes; mentoring, time, goal attainment, and doubt/apprehension provided useful information for implementing changes in the action research cycles. The additional categories are also useful for further analysis by the institution and future researchers.

Once the narrative data was coded line-by-line, it was reread and assigned a specific category. A total of twenty four codes had been created when the analysis was complete. During the coding process, the context of the data was taken into consideration before a code was assigned. For example, a student provides a negative comment stating that “mentoring did not help me on my last exam; my test anxiety was still there.” The natural inclination would be to code this phrase as a negative response to the mentoring experience, but further analysis reveals it should be assigned under the category *academic confidence* using the code *no change* because the statement reflects an unchanged academic confidence level rather than a negative experience towards mentoring. The following figure illustrates the coding process used to provide findings for the research questions.
Inductive Analysis of Qualitative Data

- Narrative Data Collected
- Finalized codes corresponding theme
- Codes
  - Positive experience
  - Negative experience
  - Neutral experience
  - Educational involvement
    - Engaged with mentor
    - Social/ making friends/meeting people
    - College activities
    - Coursework/classroom
  - Increased confidence
    - No change
    - Mentor influence
    - Decreased confidence
  - School- Positive feelings
    - School- Negative feelings
    - Resource availability
    - Faculty helpfulness
    - Student activities
    - Resources
  - Waste of time
    - Lack of time
    - Amount of time
    - Scheduling problems
  - Achieve
  - Help
  - Afraid
  - Goal attainment
- Sorted by participant
- Reduction of codes to address Research Questions
- Multiple readings of data
- Line-by-line coding of data
- Themes
  - Mentoring
  - Student Engagement
  - Academic Confidence
  - Institutional Satisfaction
  - Time
  - Goal Attainment
  - Doubt/Apprehension
- Use of data
  - Action Research Recommendations
  - Research Question 1 Recommendations
  - Research Question 2 Recommendations
  - Research Question 3 Recommendations

Figure 16: Inductive Analysis/ Open Coding
The frequency of the individual codes is illustrated in Figure 17 below. Positive statements regarding the mentoring experience were the most frequently coded item followed by statements of improved academic confidence.

![Figure 17: Coding Frequency](image)

**Research Question 1- Student Engagement**

*Does a peer-to-peer mentoring program increase student engagement?*

Narrative data collected from pre and post surveys along with mentee reflection reports provided answers to Research Question 1. Reflection report data was analyzed and contained five final codes. General statements of becoming more involved in various activities were coded as *involved*. Statements regarding becoming engaged with meeting and interacting with others, including their mentor were coded as *meeting*. Comments that pertained to making friends,
overcoming shyness, and forming of networking relationships were coded as social. Narratives that referenced increased involvement with college clubs, workshops, and use of campus resources were coded as college activities. Comments related to becoming more involved with coursework and increased understanding of their program of study were coded as coursework. These codes are provided in Table 13 and illustrated in Figures 18 and 19.

Table 13

Student Engagement Narrative Data Coding

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Count</th>
<th>% of Total Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement involved</td>
<td>21</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>Student Engagement meeting</td>
<td>6</td>
<td>2.20</td>
<td></td>
</tr>
<tr>
<td>Student Engagement social</td>
<td>22</td>
<td>7.90</td>
<td></td>
</tr>
<tr>
<td>Student Engagement college activities</td>
<td>9</td>
<td>3.20</td>
<td></td>
</tr>
<tr>
<td>Student Engagement coursework</td>
<td>9</td>
<td>3.20</td>
<td></td>
</tr>
</tbody>
</table>

Figure 18: Graphical Representation of Student Engagement Responses
Social engagement and general statements of active involvement with others were the two most common responses identified on mentee reflection reports. A total of 22 statements were coded as social engagement. The following examples were taken from the narrative data. See Appendix O for a complete list of coded narrative data.

- My level of engagement is good and I have learned so much about my mentor and his interests.
- I have learned to get along with people different from the ones I am used to.
- Participating in the study allows people to get together and form relationships.
- I was wrong about the program because it helped me break free of being in my anti-social bubble.
- I get along with someone I never thought I would have easily.
- I am not afraid to talk to those different from me.
- I was able to socialize with those of a different age and educational background.
- I have always thought I was a people person, but later discovered I was not as much as I would like to be.
- Participating in this program has caused me to interact with others.
- I have found my situation is similar to others.
- Because of this study, I have had more contact with others. It is a great networking tool.
• The study has been an icebreaker experience, a way to bring you out of yourself and be more open and friendly.
• Groups meetings are fun and I like seeing how everyone is doing.
• I feel like my people skills are getting better and don’t feel as shy as I once did.
• I have benefitted from this study largely in part because I have made a friend.
• I have gained a friend and a mentor.
• I am normally a shy person but feel like I am growing out of it and not quite as nervous around strangers.
• Benefits from mentoring are I am less shy and know more about the college support.
• I am happy there is face-to-face communication between us at this time.

Statements that were of a general nature, but indicated increased student engagement were coded as involved. A total of 21 items from the narrative data received this code. The following are examples were taken from the narrative data.

• I am learning things from another’s perspective.
• I am getting very used to the program.
• My engagement is at a very excellent level.
• I have been involved and am currently involved in several clubs and programs.
• It benefits me to have someone help me with school work that I don’t understand and tell me about any activities taking place.
• My level of engagement with this study has gotten better.
• I am learning for a project to work, there must be effort made.
• I wanted to be a part of this study because I believe in finishing projects.
• Because of this study, I have had more contact with other students and am networking.
• I would describe my level of student engagement as high.
• I have been spending a lot of time on campus this semester.
• I feel like I am engaged meeting with my mentor every week.

The following statements from student narrative data indicate increased engagement with coursework.

• I now know which classes to take next semester to fulfill my program requirements.
• I thought I had a good plan on what classes to take but now know better.
• I enjoy discussing the classes I have taken and knowing which ones are best to take to become a good leader.
• With my mentor already have taken the classes I am taking, he understands what I need help with.
• I am open to suggestions and corrections.
• I am learning a great deal about the business management program.
• I have learned a lot about the course that I didn’t know when first starting the college.

Nine instances of student engagement involving college activities were coded from narrative data. The following statement indicate engagement with college activities and services. See Appendix O for a complete list of coded narrative data.

• I like the workshops that will help us improve for management positions.
• I like learning about the activities the college has.
• Through information and activities, I feel the instructors and staff are making an effort to help the students.
• I have learned a lot about the college from my mentor and know about clubs and programs to help us.
• Students should also use the library, the NET, and tutoring services.
• The benefits I have gotten are not being so shy and learning about the different student support on campus.

The final coded section for the student engagement category was meeting.

Narrative data that pertained to students interacting with others, including their mentor, received this code. The following examples to illustrate meeting were taken from reflection reports I was able to meet new people.

• I am talking with my mentor a lot more than usual.
• If we don’t meet at school, we will email or talk on the phone.
• I have attended all but one of my meetings with my mentor.
• I visit my mentor after each class whether on or off campus.

The pre and post surveys were also used to evaluate changes to participants’ level of student engagement. Six out of nine participants reported an increase in their level of engagement as a result of participating in the mentoring study. Table 14 provides each participant’s beginning and ending perceptions based on pre and post survey written narratives regarding their level of student engagement.
Table 14

Pre and Post Survey Student Engagement Responses

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre Survey</th>
<th>Post Survey</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belinda</td>
<td>I'm a shy person and don't like really engaging with a lot of people. Once I get to know someone, I will start engaging. I need to get out of my shyness.</td>
<td>I now pay more attention in class. I feel like I am learning more and working in groups where we help each other with projects and homework. I am not participating in any school activities because of work but will try to participate in student clubs later.</td>
<td>Increase</td>
</tr>
<tr>
<td>Allen</td>
<td>I pay attention in class and have friends but do not participate in many clubs.</td>
<td>The college has many different ways to engage students on and off campus. For the student that wants to be engaged and active, the resources are there.</td>
<td>No Change</td>
</tr>
<tr>
<td>Doug</td>
<td>I have an average level of engagement. I love to participate but at the same time I am not a people person unless it is totally necessary. I am getting used to it and willing to work on it but need to be more social.</td>
<td>My level of engagement is good because I am getting used to getting along with different people. No matter who they are, I find I have something in common with them.</td>
<td>Increase</td>
</tr>
<tr>
<td>Martha</td>
<td>I have formed friendships with previous classmates and still communicate through texts or calling.</td>
<td>I have been in several study groups. I have formed friendships with some students and networked with others. I have not joined any clubs yet.</td>
<td>Increase</td>
</tr>
<tr>
<td>Kim</td>
<td>This is my first day of class. I have talked to all my teachers and have made a study buddy.</td>
<td>My level of engagement has not been high because this is my first semester and have not gotten involved in student clubs.</td>
<td>No Change</td>
</tr>
<tr>
<td>Sherri</td>
<td>I am excited to have a mentor to help me figure out how to use a computer and help with lessons.</td>
<td>The NET and my new friends are helping me to understand everything.</td>
<td>Increase</td>
</tr>
<tr>
<td>Kathy</td>
<td>I tend to begin the semester very engaged and roll off during the middle and end.</td>
<td>I have stayed interested in most of my classes but feel some move too slowly.</td>
<td>Increase</td>
</tr>
<tr>
<td>Sharon</td>
<td>My level of engagement is okay. Right now, I team up with fellow peers and compare notes and get feedback on work.</td>
<td>I have better focus when I used to get stress about papers or assignments</td>
<td>Increase</td>
</tr>
<tr>
<td>Davis</td>
<td>I actively participate in class and have been a part of the three clubs on campus. I would say I am very engaged.</td>
<td>Very engaged. I am an extrovert and participate in class and help my classmates. I participate in three clubs and will be adding another soon. My engagement has increased.</td>
<td>Increase</td>
</tr>
</tbody>
</table>
Figure 20 illustrates the numeric scoring of each participant on the pre and post survey. Students were asked on each survey to rate their level of engagement on a scale from 1-10. To aid in numerically rating their level of engagement, examples of student engagement were provided on each survey. Six out of nine participants reported an increase in their engagement levels and the results support findings found in the narrative engagement responses. Findings suggest peer mentoring is effective in increasing a technical college student’s engagement with peers, college activities, and coursework.

![Figure 20: Student Engagement Pre and Post Survey](image)

Research Question 2- Academic Confidence

Does a peer-to-peer mentoring program increase students’ academic confidence?

Data to provide answers for Research Question 2 was obtained using pre and post surveys and reflection reports. Coding of narrative data resulted in the creation of three academic confidence codes: increase, no change, and mentor characteristics. Statements in which the participants indicated that mentoring provided academic benefits were coded as increase. Statements in which the participants noted no effect on academic confidence were coded as no
Statements in which the participant indicated that traits or qualities of their mentor affected their academic confidence, both positively and negatively, were coded as *mentor characteristics*. Table 15 illustrates the number of instances coded in the reflection report narrative data regarding academic confidence. Figure 21 illustrates the percentage of each code for the category.

**Table 15**

**Academic Confidence Narrative Data Coding**

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Count</th>
<th>% of Total Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>32</td>
<td>11.5</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>no change</td>
<td>5</td>
<td>1.8</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>mentor characteristics</td>
<td>3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

**Figure 21**: Academic Confidence Responses by Percentage
The majority of responses coded under the category *academic confidence* were coded as *increase* as a result of participating in the peer mentoring program. Only five responses indicated no change while three responses noted that specific mentor traits affected their academic confidence. The following statements were taken from narrative data and indicate an increase in student confidence. See Appendix O for a complete list of coded narrative data.

- *I am very confident in what I am going for and open to any ideas regarding academics from my mentor.*
- *On a scale of one to ten, my academic confidence is a nine.*
- *My academic confidence is good so far and am getting used to my schedule and routine.*
- *It is good because I am starting to talk more about what I want to do and what classes to take in order to transfer.*
- *It gave a bit of a confidence boost when making decisions.*
- *I have learned a lot of information getting further along in the program.*
- *My level of academic confidence has risen from participating in the experiment.*
- *I feel this experiment is beneficial when it comes to having the confidence that I can do this and that.*
- *I feel this program has helped me build self confidence and gotten me to point of believing I can do whatever I need to do and not feel like a dummy.*
- *I feel that I am no longer a burden or on a level that I can’t do it all.*
- *I don’t feel like I have to do it alone or bug someone when I don’t understand.*
- *I’ve got a feeling that I am on the right track to succeed in my career.*
- *I am more confident in myself in regards to school. I may take a longer but I will finish the course with good grades.*
- *My confidence in math has gone up and I am helping my mentor with her math.*
- *I am more confident from being in the mentoring program.*
- *I think I can do better in class because I know more about things at the college to help me.*

While the majority of participants reported an increase in their level of academic confidence, several comments regarding participating indicated *no change.*

- *My confidence is already on a level since I am familiar with the school.*
- *I honestly haven’t learned a great deal.*
- *My confidence hasn’t really changed.*
- *This study did not improve my academic confidence at all.*
Additionally, several comments from participants specifically mentioned that the mentor was key in establishing academic confidence.

- *It is good having a mentor to help you out if you are struggling in a class.*
- *Even though at times my mentor had no idea what I was talking about, they still seemed interested and made me feel better.*
- *I think the reason so many people drop out is because they come in and don’t have someone to turn to for help thinking they can handle it on their own.*

Academic confidence was also measured on the pre and post surveys. Students numerically rated and narratively described their initial level of confidence prior to beginning the study. As with student engagement, examples of what constitutes academic confidence were provided. At the conclusion of the study, students were again asked on the post survey to numerically rate and narratively describe their level of academic confidence. Table 16 provides each participants’ beginning and ending narrative response to his/her level of academic confidence, along with analysis of results.
### Table 16

**Pre and Post Survey Academic Confidence Responses**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre Survey</th>
<th>Post Survey</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belinda</td>
<td>Since enrolling, I feel fairly confident. I am going to make every effort to complete my courses.</td>
<td>Since starting the mentoring program, my confidence of success has went from a zero to an eight. I am more comfortable now after having a mentor in succeeding. My mentor answered a lot of questions about how to be successful.</td>
<td>Increase</td>
</tr>
<tr>
<td>Allen</td>
<td>As long as I put my mind to it, I do well with it. This is my everything in life. I put a lot of value into my education.</td>
<td>I feel I am adequately prepared for class. I walk in with focus and vigor.</td>
<td>Increase</td>
</tr>
<tr>
<td>Doug</td>
<td>I have a high level of confidence because I know what I'm going for and that I am not going to stop until I achieve it. I am willing to learn new things so I can apply these skills to the real world.</td>
<td>My level of confidence is good and may be because I am making progress through college. I feel like I know more about business and how they work.</td>
<td>Increase</td>
</tr>
<tr>
<td>Martha</td>
<td>I am determined to finish my classes. I sometimes encounter issues but press on. I know to ask for help.</td>
<td>I am learning things to help me be a better manager and handle business matters. I look at my classes as a tool to reach my goals.</td>
<td>Increase</td>
</tr>
<tr>
<td>Kim</td>
<td>My confidence is low because I am scared I won't understand the lessons and readings on my own. I also don't have family with a degree to turn to for help.</td>
<td>My confidence in some of my online classes is low because I need someone to talk about how to do things like instructions, course content. I think I have ADHD.</td>
<td>No Change</td>
</tr>
<tr>
<td>Sherri</td>
<td>I am hoping that this program will take my skills to a higher level so that I can do anything in life.</td>
<td>I like coming to school and learning. I like it better since I got a new mentor.</td>
<td>Increase</td>
</tr>
<tr>
<td>Kathy</td>
<td>I usually find some way to scrape by. I need to make more effort to not do that.</td>
<td>I am pretty confident. I seem to be learning fast with only an occasional struggle.</td>
<td>Increase</td>
</tr>
<tr>
<td>Sharon</td>
<td>I am confident in all that I put forth the effort to do.</td>
<td>I have a higher level of academic confidence and a positive attitude equals positive results.</td>
<td>Increase</td>
</tr>
<tr>
<td>Davis</td>
<td>I have worked in my field for some time but still feel a lot of the information is new to me.</td>
<td>I feel I grasp the knowledge easily but question myself in application or overthinking the information.</td>
<td>No change</td>
</tr>
</tbody>
</table>
Analysis of the pre and post survey academic confidence narrative questions indicate that seven out of nine participants reported an increase after participation in the mentoring program. Analysis of the pre and post survey numerical ratings for academic confidence supports findings for the narrative data provided. When rating one’s beginning and ending academic confidence, seven reported an increase, one no change, and one decrease. Figure 22 illustrates the numerical rating each participant provided at the beginning and end of the study.

**Figure 22: Academic Confidence Pre and Post Survey**

**Research Question 3- Institutional Satisfaction**

*Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?*

Data to provide answers for Research Question 3 was obtained using pre and post survey narrative and numeric data and reflection reports. Comments made by participants in their reflection reports regarding the college received one of four codes. Responses were coded as *positive, negative, resources,* and *activities.* A total of twenty general statements that conveyed feelings of satisfaction with their institution received the code *positive.* Six comments from
participants reflected negative feelings about the institution. Specific comments regarding services and resources provided by the institution were coded resources. Two comments conveyed satisfaction with specific college activities and were coded activities. Table 17 illustrates the number of coded items for Satisfaction from participant narrative data in reflection reports. Figure 23 illustrates the percentages for each code in the category.

Table 17

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Count</th>
<th>% of Total Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>school/positive</td>
<td>20</td>
<td>7.2</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school/negative</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>11</td>
<td>3.9</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>activities</td>
<td>2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Figure 23: Institutional Satisfaction Responses by Percentage
Greater than 50% of the coded items for institutional satisfaction reflected positive feelings or experiences with the institution. Statements ranged from a belief that college wanted “to help them” to feelings that instructors and staff wanted to help them succeed. The following are examples of comments coded from narrative reflection report data indicating positive feelings of institutional satisfaction. See Appendix O for a complete list of coded narrative data.

- I am willing to learn about how my institution works from an educational perspective.
- I have always been satisfied with my college.
- I am very satisfied with the school.
- The school is doing a good job.
- For the most part, I am really satisfied with my school.
- Through information and other activities, I believe the instructors and staff are making an effort to help the students.
- I am very satisfied with my school. They want to see students succeed.
- I am very satisfied. I have learned a lot about special services and the NET.
- I am much more satisfied with my school after this study because it is being done to help technical college students.
- I like the college.
- I believe the college wants to help me pass my courses and have a career.

Not all comments were positive. The following are examples of negative feelings students expressed in reflection reports regarding the institution.

- Being in this program, along with my other programs, I must say I am less enamored by this school, but only in the policies it carries.
- At this particular institution, student power is extremely limited.
- I feel like I am limited in making meaningful decisions at the school and students have no say.
- Without student input in how the school is run is a major reason for the decline in admissions and attendance.
- Quite frankly, if not for my instructors and advisors, I may have considered transferring.
- The school seems to be holding students to the lowest common denominator which is killing the experience for those of us who care.

Specific statements regarding satisfaction with resources and programs on campus were coded as resources. The following are examples found in the narrative data.
• The college has many people and services to help people who need it.
• I have learned quite a bit about the different services at the college.
• I have learned about scholarships and the lending library to help students who can’t afford books.
• I think I can do better in my class because I know about things the college has to help me.
• I have been using the library, the NET, and different tutoring services.
• The mentoring program provides a lot of information about things there to help them do well.
• Mentoring helps student understand all the things the college has to help them.

Additional narrative and numerical data regarding institutional satisfaction was obtained from the pre and post survey. As with Research Questions 1 and 2, students were asked to provide an initial narrative response and numeric rating for their level of institutional satisfaction. At the conclusion of the study, students repeated the data collection process. Table 18 provides beginning and ending narrative pre and post survey data for institutional satisfaction and analysis of results.

Table 18

Pre and Post Survey Institutional Satisfaction Responses

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre Survey</th>
<th>Post Survey</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belinda</td>
<td>My satisfaction with the college is good. I needed help in English and one teacher offered tutoring that really helped me.</td>
<td>One thing I can say is that the teachers I have had so far have been awesome. A suggestion would be to have a gym at school for busy people to use. A pool or additional sport opportunities could increase school satisfaction and increase enrollment.</td>
<td>Increase</td>
</tr>
<tr>
<td>Allen</td>
<td>The institution has been very helpful to me. Thanks to the college, I have a great job in my field. The teachers have been excellent but the administration could use some work though</td>
<td>The institution does pretty well as far as academically preparing us as students. Admissions and financial aid could be more helpful.</td>
<td>No change</td>
</tr>
<tr>
<td>Participant</td>
<td>Pre Survey</td>
<td>Post Survey</td>
<td>Results</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Doug</td>
<td>I have an average level of satisfaction because even though I like the idea to participate, I usually don't attend because I never really cared for it. I like the idea of gaining more institutional satisfaction.</td>
<td>My level of institutional satisfaction is fair. I feel like it is improving as I learn more about the college through the mentoring program.</td>
<td>No change</td>
</tr>
<tr>
<td>Martha</td>
<td>I love my school and atmosphere. They are helpful but you have to be persistent.</td>
<td>I love my school and have had a very positive experience with people, teachers and staff. They have went out of their way to help and assist me. I also like the student areas where you can study quietly or work with others.</td>
<td>Increase</td>
</tr>
<tr>
<td>Kim</td>
<td>So far I like my teachers and location. I wish I could have went to a more prestigious school to make my family prouder.</td>
<td>I am happy with my instructor in this class but think some of my other teachers should not be teaching.</td>
<td>No change</td>
</tr>
<tr>
<td>Sherri</td>
<td>I want to get through all my classes and make good grades to get my degree.</td>
<td>No comment.</td>
<td>No change</td>
</tr>
<tr>
<td>Kathy</td>
<td>Some of the teachers are sub-par and make me nervous. I am not a fan of the school in particularly this campus.</td>
<td>I don't know if it depends on the semester but I seem to be more engaged in classes.</td>
<td>Increase</td>
</tr>
<tr>
<td>Sharon</td>
<td>I have been in school for a very long time and finally have an adviser that can advise and instruct.</td>
<td>The college has everything a student needs to be successful. The advisers and instructor and staff will answer your questions at all times. The environment is calm and everyone makes you feel welcomed.</td>
<td>Increase</td>
</tr>
<tr>
<td>Davis</td>
<td>Some of the instructors are great. There have been difficulties with advisement and some of the paperwork is confusing.</td>
<td>The school has many wonderful people but I feel the students need more empowerment. There is a feeling of insignificance especially within student government. Some of the rules the college has are reflective of a parent/child relationship. For instance, volunteer or community work requires an advisor be present.</td>
<td>No change</td>
</tr>
</tbody>
</table>

Analysis of the pre and post survey narrative data suggests that five out nine participants experienced no increase in institutional satisfaction as a result of participating in a mentoring program. These results are supported by numeric reporting for institutional satisfaction in which
two participants reported decreased levels, three no change, and four increased. Figure 24 provides an illustration of the participant’s beginning and ending institutional satisfaction scores.

![Figure 24: Institutional Satisfaction Pre and Post Survey](image)

**Research Question 4- Race and Mentoring**

*Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?*

The self-reported race of participants in this study consisted of two African-Americans, one bi-racial, and six Caucasians. To provide answers to Research Question 4, three variables were used for analysis to determine if mentoring benefitted those of a particular race: student engagement, academic confidence, and institutional satisfaction. Pre and post survey scores for each variable were analyzed to determine if changes occurred with increases suggesting a positive benefit from participating in the mentoring study.

African-American participants reported increased student engagement as a result of participation. One bi-racial participant also reported an increase in his/her level of engagement. Of the six Caucasian participants, only three reported that their level of engagement had
increased at the conclusion of the study. Figure 25 provides beginning and ending engagement scores by race.

Figure 25: Student Engagement by Race. This figure illustrates self-reported engagement scores recorded on the pre and post survey.

The next category examined was pre and post academic confidence levels by race. Both African-American participants reported an increase in their confidence level. The bi-racial participant also reported an increase. Of the six Caucasian participants, four reported increased confidence, one no change, and one decreased. Figure 26 illustrates the pre and post survey academic confidence scores by race.
Figure 26: Academic Confidence by Race. This figure illustrates the self-reported academic confidence scores on the pre and post survey.

The final area examined by race were the pre and post institutional satisfaction scores. Of the two African-American participants, neither reported an increase in their satisfaction with the college as a result of participation in the mentoring study. The bi-racial participant reported a decrease in his/her institutional satisfaction. Four of the six Caucasian participants reported increased institutional satisfaction, one reported no change, and one reported a decrease. Figure 27 provides the pre and post survey institutional satisfaction scores by race.
Figure 27: Institutional Satisfaction by Race. This figure illustrates the self-reported institutional satisfaction scores from the pre and post surveys.

Analysis of the results suggests that all participating races benefitted from participating in the mentoring study. The majority of all races experienced increases in their levels of engagement and academic confidence. The only variable with a significant difference regarding race was institutional satisfaction. Four of the six Caucasian participants reported increases in their institutional satisfaction while the three non-Caucasian participants either reported no change or a decrease.

**Research Question 5- Age Group and Mentoring**

*Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?*

To provide answers for Research Question 5, the pre and post survey variables student engagement, academic confidence, and institutional satisfaction were used. Participant scores were then coded as one of four age groups. The age of participants in this study were grouped as follows: 18-24, 25-29, 30-40, and 41 and above. Distribution of the groups were three in the 18-
24 age group, one in the 25-29 age group, two in 30-40 age group, and three in the 41 and over age group.

For the variable student engagement, six of nine participants reported an increase. Of these, all three students in the 41 and above age group reported becoming more engaged as a result of participating in the mentoring study. Two in the 18-24 age group reported increases with one reporting no change. The sole reporting for the 25-29 age group reported no change while the 30-40 age group reported one increase and one no change in engagement levels. Figure 28 provides beginning and ending engagement scores.

![Bar chart showing student engagement by age group](image.png)

**Figure 28: Student Engagement by Age Group.** This figure illustrates the self-reported student engagement levels from the pre and post survey.

When examining the variable academic confidence by age group, seven out of nine participants reported an increase. All three participants in the 41 and above group reported increases along with the two participants in the 30-40 age group also reporting increases. Two of the three participants in the 18-24 age group reported an increase while the other member reported no change. The one participant in the 25-29 age group reported a decrease in his/her academic confidence level. Figure 29 illustrates the pre and post scores by age group.
The last variable examined by age group was institutional satisfaction. Participants in the 18-24 age group reported one increase, one decrease, and one no change. The one participant in the 25-29 age group reported an increase. The 30-40 age group members reported one increase and one decrease. The 41 and above group reported one increase and two with no change. Figure 30 provides beginning and ending institutional satisfaction scores by age group.

Figure 29: Academic Confidence by Age Group. This figure illustrates the self-reported academic confidence ratings from the pre and post survey.
Figure 30: Institutional Satisfaction by Age Group. This figure illustrates the self-reported institutional satisfaction scores from the pre and post survey.

Analysis of variables to determine if those of a particular age group reported more benefit from participating in a mentoring program provided interesting results. For the variable engagement, six out of nine participants reported an increase. The remaining three reported no increase. All students in the 41 and above group reported increases suggesting mentoring is beneficial to those returning to school later in life by helping to accclimate into college life. Seven out of the nine participants reported increases in their academic confidence, one reported no change and one reported a decrease. All participants in the 41 and above group reported an increase. For the institutional satisfaction variable, two of the three in the 41 and above group reported no change.

Research Question 6-Gender and Mentoring

Do those of a particular gender in technical college report more benefit from participation in a peer-to-peer mentoring program?

The final research question examined pre and post survey reporting using the variables student engagement, academic confidence, and institutional satisfaction to determine if a
particular gender benefitted more from mentoring. The study consisted of three males and six females. For the variable student engagement, five out of six females reported becoming more engaged after participation in the study with one of the three male participants reporting an increase. One female and two males reported no change. Figure 31 provides before and after engagement scores by gender.

![Figure 31: Student Engagement by Gender. This figure illustrates the self-reported student engagement scores from the pre and post survey.](image)

For the academic confidence variable, all six female participants reported an increase. Male participant reporting was one increase, one no change, and one decrease. Figure 32 illustrates beginning and ending academic confidence scores by gender.
Figure 32: Academic Confidence by Gender. This figure illustrates the self-reported academic confidence scores from the pre and post survey.

The remaining variable, institutional satisfaction analyzed by gender, revealed that all three male participants reported increases. Of the six female participants, one reported an increase, three reported no change and two reported a decrease in their level of institutional satisfaction. Figure 33 provides beginning and ending institutional satisfaction scores by gender.

Figure 33: Institutional Satisfaction by Gender. This figure illustrates the self-reported institutional satisfaction scores from the pre and post survey.
Analysis of results for data to determine if a particular gender benefitted more from mentoring revealed several things. First, both genders reported benefits from participation depending on the variable examined. Second, females overwhelmingly experienced higher levels of engagement and academic confidence than did male participants. Lastly, male participants experienced increases in their satisfaction with the institution while females did not.

**Conclusion of Findings**

Chapter 5 presented findings of the study by providing answers to the research questions using both qualitative and quantitative data. There were a total of six research questions asked regarding peer mentoring in technical education. Questions one through three were answered using a qualitative coding system of participant’s original words as well as pre and post survey numerical self-ratings. Questions four through six were addressed by pre and post survey numeric data.

Overall, the findings suggest that mentoring is beneficial to technical college students. Specific components of the mentoring relationship appeared to provide greater benefit than others and results were dependent on age, sex, and race. The majority of participants noted increased engagement and academic confidence as a result of having a peer mentor providing support during the semester.
CHAPTER 6

DISCUSSION AND CONCLUSION

This chapter will provide discussion, limitations, conclusions, implications and recommendations based on the study findings regarding peer-to-peer mentoring in technical education. Previous research studies have reported numerous benefits for first-year university and community college students participating in peer mentoring activities (Campbell & Campbell, 2007; Collier & Fellows, Crisp, 2010; Hu & Ma, 2010; Nora & Crisp, 2008; Stromei, 2000). This action research study sought to determine if similar benefits were afforded to those enrolled in technical education where minimal research exists. As a business major and someone who has spent twenty years in the private sector, I understand the benefits of having a mentor to help successfully acclimate into various jobs. I chose action research to conduct the study because the utility of the process allowed me to evaluate real-time data to see what was and was not working in a peer-to-peer mentoring program involving technical college students (Mertler, 2012). This in turn allowed me to refine the mentoring program during the course of the study in hopes of increasing student success. In addition to providing answers to the research questions posed, action research provided the opportunity to actively engage in the research process providing a host of various information. This included gaining greater insight into technical college student motivations, a deeper understanding of my strengths and weaknesses as an instructor, and strengths and weaknesses inherent to technical college education.
Summary of the Study

This study was conducted to evaluate if having a peer mentor increased technical college students’ engagement, academic confidence, and institutional satisfaction. These areas were examined after a thorough review of literature suggesting increases in student engagement, academic confidence and satisfaction with their institution correlated with increased student retention and graduation (Astin, 1984; Berger & Milem, 1999; Tinto, 1975, 1987; Voorhees, 1987). Applying persistence theories by Astin (1984), Berger and Milem (1999), and Tinto (1975), a peer-to-peer mentoring model (Figure 1, p.14) was created and tested using a specific mentoring curriculum focusing on weekly activities that promoted social and academic integration, physical and psychological involvement, and perceptions and behavioral involvement. The study was conducted over the course of a sixteen week semester. There were a total of nine mentees and five mentors engaged in a mentoring relationship. The study was conducted using Riel’s (2010) Progressive Problem Solving with Action Research Model (Figure 2). Three research cycles approximately five weeks in length were conducted that each included a planning phase, action phase, collection and analysis of data phase, and reflection and implementation of change phase.

A variety of methods were employed to collect study data. A pre and post survey obtained participant demographic information and numeric and narrative data regarding their levels of engagement, academic confidence, and institutional satisfaction. Participants, both mentees and mentors, submitted an approximately one page reflection report at the end of each action research cycle providing narrative data on engagement, academic confidence, institutional satisfaction, and what they felt was and was not working in the study along with any changes they would like to see implemented. The final instrument used for data collection was a weekly
mentoring report. Initially only mentees submitted this document, but mid-way through the study, mentors also began submission. This document provided me with information about time spent in the mentoring relationship each week, how the interaction took place, who initiated the contact, location of interaction, and topics discussed. This study focused on answering six questions:

1. Does a peer-to-peer mentoring program increase student engagement?
2. Does a peer-to-peer mentoring program increase students’ academic confidence?
3. Does a peer-to-peer mentoring program increase students' overall satisfaction with their technical college experience?
4. Do students of different racial groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
5. Do students of different age groups enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?
6. Do students of different gender identifications enrolled in technical college report more or less benefit from participation in a peer-to-peer mentoring program?

Discussion of Findings

Research questions one through three were addressed using qualitative and quantitative data participants provided on pre and post surveys in addition to reflection reports submitted at three intervals during the study. Questions four through six were answered using numeric data recorded on the pre and post surveys.

Research Question 1

Results from analysis of pre and post survey numeric and narrative data revealed that a peer-to-peer mentoring program increased student engagement for six of nine participants (66%).
Two of the three participants reported as “no change” began the study with high levels of engagement and reported similar levels when the study concluded. Only one participant reported not being engaged and attributed it to failure to become involved with college clubs and activities.

Interestingly, the majority of reported engagement coded from participant reflection reports was of a social nature with participants reporting overcoming issues with shyness and forming relationships with others. Forming of relationships has been reported to contribute to higher levels of personal growth in turn leading to higher rates of program completion (Fleming et al., 2005). Thirty-three percent of all engagement codes recorded from reflection reports pertained to social aspects of the mentoring relationship with thirty-one percent recorded as general statements of increased engagement. Thirteen percent of engagement codes pertained to involvement in college activities and 13% pertained to increased involvement with coursework.

Findings from this study are supported by existing literature suggesting that mentoring is a useful tool for social integration into college (Campbell & Campbell, 2007; Crisp, 2010; Shultz, 2001). Several participants noted that not only did they gain a mentor, but also made a friend and would remain in touch with that person personally and professionally. Additionally, a key component of Tinto’s (1975) Model of College Student Dropout, in which those who fail to socially integrate into college life experience are at a higher risk of failing to persist, suggests that mentoring may be a successful method in achieving social integration. The findings of this study regarding technical education are in agreement with literature pertaining to traditional four-year colleges in which mentoring has been shown to increase first-year student engagement (Holland et al., 2012; Howard & Smith-Goodwin, 2010; Salinitri, 2005).
The link between engagement and persistence has been extensively researched (Astin, 1993; Bean & Eaton, 2000; Tinto, 1975, 2004; Voorhees, 1987). The presence of a peer mentor appears to be an effective tool to engage these students commonly identified to be more at risk of failure to complete their educational pursuit (Chen & Carroll, 2005). Those that noted increased engagement primarily reported engagement with peers or socialization. The benefits of this socialization were multi-faceted and appeared to allow for the formation of lasting friendships, someone to “lean on” when difficulty with coursework arose, and provided a “cheerleader” to encourage the mentee to press on.

Often, interaction between participants was merely social in nature with participants observed sharing lunch together. Sometimes it would consist of the mentor and mentee, while at other times it would consist of multiple study participants together, in a sense creating a type of community on campus. Findings support Tinto’s (1987) suggestion that colleges should become social and intellectual communities to address retention rates.

**Research Question 2**

Analysis of numeric and narrative data reported on the pre and post surveys revealed that having a peer mentor over the course of the semester increased the academic confidence in seven out of nine participants (77%). The two participants who reported no change in academic confidence attributed it to “overthinking information” and “low confidence in online classes and I might have ADHD.” A total of 32 responses found on participant reflection reports were coded as increases in academic confidence due to participating in peer mentoring.

Participant confidence increased primarily as a result of having someone to ask questions when they encountered difficulty with subject matter and the knowledge that if difficulty arose, they would have support available. The mentor’s experience with the
coursework the mentee was engaged in also provided increased confidence levels. Sharing information about school resources to help students academically was also noted as a source of increased confidence since several students were unaware these services existed.

Findings for Question 2 regarding mentoring’s affect on academic confidence are in agreement with the literature reviewed suggesting a peer mentor can provide increased academic confidence to help first-year students succeed (Fantuzzo et al., 1989; Hembree, 1988; Nora & Crisp, 2008; Roger & Tremblay, 2003). The results of this study were similar to results Howard and Smith-Goodwin (2010) found in their research in which 74% of participants felt participating in a mentoring program had helped them academically. Technical college students appeared to reap the same benefits at comparable levels from the presence of a peer mentor as those at four-year universities.

Findings from this study suggest a peer mentor can increase a student’s academic confidence regardless of educational background. The sample used for this study contained a variety of students identified in the literature as “at risk” of not persisting until completion of their program of study (Campbell & Campbell, 2007; Collier & Fellows, 2008; Tinto, 1993). During the course of the study, participant confidence levels visibly increased. The fear and apprehension, especially among the first-time students and older students, diminished as the study progressed. The availability of a person that had previously completed the course and could provide information on materials they struggled with was the key component for the increases recorded. The mentor functioned as a role model, as well as a tutor in some instances, leading to increased self-efficacy to succeed academically.

The mentors also benefitted academically from participation. Several noted that they learned more about the course subject matter as they prepared to present information to their
mentee. One mentor reported that her mentee provided her with math tutoring to help her succeed in college algebra. These findings lend support to Good et al. (2000) research that found that 50% of those serving as mentors improved their study skills as a result of serving as a mentor.

As the researcher and the course instructor for participants, I was able to evaluate participant scores on assignments during the semester. Five out of nine participants received an A for the course, three a B, and one a C. Those that did not make A’s in the course began with failing test scores on the first exam. Scores for the remainder of the course gradually increased resulting in the final grades. Without a peer mentor, it is likely they would not have successfully completed the course or received a lower grade for the course.

**Research Question 3**

Four out of nine participants reported an increase in their level of institutional satisfaction on the pre and post survey as a result of having a peer mentor. Two participants reported their satisfaction with the institution had decreased after participating and three reported no change. The four participants who reported an increase attributed the increase to the instructors and staff at the college and felt they sincerely cared about their success. The participants whose satisfaction decreased attributed it to problems with instructors and the financial aid office.

Coded narrative data for institutional satisfaction contained twenty general statements of positive feelings towards the institution, six negative statements, and eleven statements regarding institutional resources. The majority of institutional satisfaction for participants arose from interactions with faculty and support services at the college. Three participants specifically stated that they felt the college genuinely wanted to see them succeed while several participants noted surprise in all the services that were available, but of which they were not made aware.
Negative feelings towards the institution mainly arose from a feeling of no empowerment. Comments included “students have no say,” “lack of student input is a leading cause of decline in attendance,” “I am not happy with school policies,” and “the school seems to hold all students to the lowest common denominator.”

Findings for Question 3 suggest that having a peer mentor had little affect on student institutional satisfaction. While some participants reported slight increases, the majority reported no change or decreases in their satisfaction. In contrast, the use of mentoring programs in traditional four-year universities has shown to improve first-year student acclimation in college life leading to increased institutional satisfaction (Campbell & Campbell, 2007; Crisp, 2010; Kartje, 1996).

While a portion of the weekly mentoring activities were geared towards increasing institutional satisfaction, perhaps the students did not connect these activities to increasing their satisfaction, thus reporting being indifferent on the pre and post surveys. Comments pertaining to negative experiences with an instructor or a service of the institution also appeared to weigh heavily on the reporting of institutional satisfaction. A negative experience with the institution or faculty member was not alleviated through the use of mentoring. Results imply that it is critical for institutions to address new student needs to minimize negative experiences when starting their educational journey. Additionally, students desire to have a greater voice in the operation of their institution which in turn would potentially increase their satisfaction.

Research Question 4

Three self-identified races participated in this study. Six identified as Caucasian, two African-American, and one as bi-racial. In evaluating the benefits of mentoring for a particular race, three variables were used: student engagement, academic confidence, and institutional
satisfaction. Students numerically rated each variable on a scale from 1-10 on their pre and post survey.

The African-American students and the bi-racial student each reported an increase in their level of engagement and academic confidence as a result of having a peer mentor. Both African-American participants noted joining study groups and forming friendships with other students. Three out of six Caucasian participants (50%) felt they had become more engaged while four out of six (66%) felt their academic confidence increased. Institutional satisfaction for non-Caucasion participants did not change from having a peer mentor. Four of the six Caucasian participants reported increases.

Findings suggest that mentoring promotes engagement and increases academic confidence among minority students. Minority students’ satisfaction with the school was not affected. Caucasian students appeared to experience similar gains for each variable as a result of having a mentor.

Approximately 49% of technical college students in Georgia identify as minorities (see Table 1, p. 68) Mentoring has been shown in this study to be a useful method to foster engagement and academic confidence and findings support previous research showing similar results (Holland et al., 2012; Shultz, 2001; Tinto, 2004). The incorporation of a peer-to-peer mentoring program in the technical college system could be an effective tool to provide support to minority students commonly identified in the literature as being more likely to fail to persist until completion of their programs of study (Campbell & Campbell, 2007; Shultz, 2001; Tinto, 2004).
Research Question 5

The majority of participants, regardless of age, benefitted from having a peer mentor when examining the variables engagement, academic confidence, and institutional satisfaction. The group that appeared to receive the greatest benefit was the 41 and above age group reporting increases in all three variables. This particular group noted initial anxiety at the beginning of the study. The presence of a peer mentor to assist them appeared to increase their confidence thus reducing anxiety. Findings are consistent with Roger and Trembly’s (2003) research that revealed having a peer mentor reduced freshman anxiety.

Mentoring for students in the 41 and above age group also increased self-efficacy, consistent with Bean and Eaton’s (2000) research which showed that belief about one’s ability increases social and academic integration into college. The 41 and above age group had either never attended college or were returning years after a previous attempt. They readily embraced the idea of having a mentor to help them succeed. In addition, the 41 and above age group also were more prompt with their document submission and met more often than the other age groups. While all benefitted, a mentoring program seemed particularly beneficial to older students who lacked initial confidence in their abilities to successfully complete coursework.

Research Question 6

In analyzing the study results by gender, female participants reported greater benefit as a result of having a peer mentor. Five out of six (83%) females reported increased levels of student engagement while only one out three (33%) of male participants noted increased engagement. Similarly, data for academic confidence showed all six females (100%) felt their academic confidence increased while one male reported no change, one male reported an increase, and one male reported a decrease. The final variable examined for gender was
institutional satisfaction. Interestingly, all three male participants reported increased satisfaction with their school while only one female reported an increase. Three females reported no change and two reported decreases. Findings for Question 6 agree with Crisp’s (2010) research that also found females benefitted more socially and academically with the presence of a peer mentor when compared to males.

At the time this study was conducted, approximately 66% of the student population were females. The ratio of males to females used in the study were representative of the school population. With such a high percentage of female students, mentoring could provide positive benefits to help increase female retention and graduation rates, females appeared to receive greater benefit and readily engaged their mentors. This early engagement contributed to the higher reported increases in academic confidence.

**Limitations**

While the research was carefully conducted, I am aware of obvious limitations. The first limitation was the small sample size used in the study. Ideally, I would have preferred a larger sample size, but circumstances yielded nine participants. Second, the length of the study made it difficult to gage residual effects of having a peer mentor on the students’ future success. Once the students begin their next semester without a mentor, would the benefits gained remain? Perhaps a tracking system of those who received mentoring could be implemented to determine if students’ behaviors changed over the course of a year. The third obvious limitation was the lack of minority students. With only three self-reported minority students, are the results representative of that group? A larger sample size would have provided more detail pertaining to minorities and the effects of mentoring. The fourth limitation was that the mentoring study only
focused on business management students. Would similar results have been obtained if participants from medical or industrial programs had undergone the same treatment?

**Implications for Future Research**

This study only scratched the surface of identifying who technical college students are and what motivates them to persist. Much more research pertaining to these students is needed to fill the gap in literature available with larger sample sizes and greater diversity of participants. Replication of the study across various programs and continuation of mentoring relationships for longer than one semester would provide additional information and aid educators in better understanding technical college students and identification of ways to help them succeed.

Findings from this research indicate numerous positive benefits provided to technical college students from the presence of a peer mentor. Further analysis of the use of mentoring will help identify specific components of a mentoring relationship and potentially refine the program for blanket application across technical colleges. Additional research regarding gender, race, and age is needed as well. Perhaps a specific group can be identified as “more at risk” of failure and a mentoring program implemented to address concerns and eventually alleviate the group’s struggle in retention and graduation. The final area suggested to be further explored by future researchers is the influence early engagement has on student socialization, academic confidence, and institutional satisfaction. Those who engaged early in the study reported greater socialization and academic confidence. A deeper understanding of what constitutes student engagement and it’s link to academic confidence and satisfaction with the institution would be beneficial at the technical college level.
Revised Peer-to-Peer Mentoring Model for Technical Education

The study began with the creation of a conceptual model (see Figure 1, p. 14) using existing persistence theories to guide the mentoring program research. After completion of the research and evaluation of the data and researcher journal, revisions were made to the model for future testing. There were several major changes incorporated into the revised model after testing over the course of one semester. First, mentoring should be a needs-based experience. Participants reported that while the curriculum was useful, some of the items were not relevant and the sequencing of what to cover was not appropriate at that time for the mentee. Rather than focus on specific topics on a weekly basis, the mentoring relationship should focus on improving mentee self-efficacy by addressing any pressing concerns (Collier & Fellows, 2008). The mentoring curriculum should be used as a guide and covered on an “as needed basis.”

The second major change incorporated into the model was the addition of “mandatory” meetings. As the action researcher, too much time was devoted to getting participants to submit documents in a timely fashion. Scheduled meeting times with adequate facilities provided would alleviate this problem. This was incorporated near the end of the study and timely submission of documents greatly improved. This change is supported by Roger and Tremblay’s (2003) research that suggested that random contact between mentor and mentee with little structure could have profound effects on mentoring outcomes.

The final major change to the mentoring model was the voluntary pairing of mentor and mentee rather than random pairing. Several participants conveyed that having “someone with similar interests that I have” would have encouraged them to participate more. While the study as a whole produced positive results, the majority of issues that arose and led to reduced participation were the result of participants noting that they “had nothing in common” with their
mentor. Researcher’s Frierson, et al. (1994) and Walker and Taub (2001) found mentoring to be most effective when the mentor and mentee shared common backgrounds. Figure 34 illustrates the revised peer-to-peer mentoring model as a result of this study’s findings.
Figure 34: Revised Peer-to-Peer Mentoring Model for Technical Education
Conclusion

This study was conducted to better understand the effects of peer mentoring on technical college students and to evaluate if mentoring was a viable option for implementation in addressing low retention and graduation rates. Persistence literature has identified social and academic integration, physical and psychological involvement, and beginning perceptions and behaviors as areas institutions should focus on to improve student success (Astin, 1984; Berger & Milem, 1999; Crisp, 2010; Tinto, 1975, 1997; Voorhees, 1987).

This mentoring research suggests that participants’ social and academic integration can be improved by the presence of a peer mentor. While institutional satisfaction did not significantly increase, a revised mentoring curriculum with more emphasis on institutional support could possibly be used to address this in the future. Some of the discontentment with the institution arose from the lack of knowledge about services offered and several participants felt they should have known about this support when beginning at the college.

Several unintended outcomes also surfaced as a result of the research. First, the presence of a peer mentor reduced participant anxiety. Reduction of anxiety was a critical component for the increases in measured student engagement and academic confidence levels and is supported by Roger and Tremblay’s (2003) work illustrating mentoring reduces anxiety which in turn increases confidence. Secondly, mentors also benefitted from participation. Mentors reported that participation as a mentor allowed them to practice management concepts learned in various courses in turn leading to professional development. Mentors reported their confidence to be an effective manager had increased as a result of participation.

While all participants benefitted in one form or another from having a peer mentor, African-American females reported the greatest overall benefit when measuring the three
variables. With a high percentage of minority and female students enrolling in technical education, a mentoring program can be one of the many tools institutions use to address the needs of their students. Embedding of mentoring components into program curriculums should be explored at the state level. Perhaps with modest refinement, this peer-to-peer mentoring model can be incorporated system wide to help students achieve their goal of graduation and obtain the job they seek.
References


Post, J. L. (2013). The role of dual enrollment in the educational achievement of technical college students (Doctoral dissertation). Retrieved from University of Georgia University of Georgia Electronic Theses and Dissertations.


doi:10.1007/s11162-010-9190-3


Tinto, V. (1987, Nov.). *The principles of effective retention.* Paper presented at the Fall meeting of the Maryland College Personnel Association, Largo, MD.


Tinto, V. (2004). *Student retention and graduation: Facing the truth, living with the consequences.* Retrieved from ERIC database. (ED519709)


APPENDIX A

MENTEE RECRUITMENT PRESENTATION

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Doctoral Research Study

This presentation is to provide you with information about participation in a doctoral research study.

This class, MGMT 1120, along with MGMT 2215 have been chosen as participants. Please listen carefully as the following information is presented.

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Topics to Discuss

- Introduction/Purpose
- Overview of Research Study
- Benefits of Participation
- Time Requirements/Document Submission
- Code of Conduct
- Consent Form
- Documents

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Welcome!

- Hello, I am your instructor, Michael Cook, also a doctoral student at the University of Georgia under the guidance of principle investigator, Dr. Elaine Adams.
- Today, I would like to share information regarding my research study and invite you to participate.

---

Introduction/Purpose of Study

- The purpose of this study is to use action research to explore the impact of peer mentoring on student engagement, academic confidence, and satisfaction with their technical college.
- The presence of a peer mentor may lead to improved relationships among class members, increased student accountability, and a feeling of shared educational support.
- Potentially, peer mentoring will have a positive effect on a wide range of factors, from student’s confidence in their ability to complete coursework, improved attendance, and a reduction in the number who withdraw from class (Egger, Van der Wolf, & Sextro, 2008; Dorn, & Xie, 2014).

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Title of Study

A CASE FOR PEER-TO-PEER MENTORING IN TECHNICAL EDUCATION

Michael Cook
University of Georgia

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Overview of Research Study

- Participation in this study is entirely voluntary and choosing not to participate will in no way impact your grade.
- Those who choose to participate will be randomly assigned a mentor to cover specific topics throughout the spring 2015 semester.
- There is no financial or academic incentive for participation.
Overview of Research Study cont.

- Mentors and mentees will follow a specifically designed curriculum throughout the semester. You are encouraged to cover additional topics as needed and document additional mentoring interactions.
- Mentors are management students completing their capstone class (MGMT 2215) and nearing graduation and have received mentor training on topics you will cover if you choose to participate.

Code of Conduct

- A code of conduct agreement will be signed by both the mentor and mentee.
- Professionalism and respect will be observed by both mentees and mentors for the duration of this study.
- The code of conduct agreement will be given to participants after random pairing of mentee with mentor.

Benefits of Participation

- For those choosing to participate as a mentee, possible benefits include: a dedicated mentor to provide support, answer questions, and provide strategies for success.
- Additional benefits include participation in research that could possibly provide information about the benefits of peer mentoring in a technical college.

Consent Forms

- Consent forms are now being distributed.
- Please carefully read and then we will open the floor for questions.
- If you would like to participate, please sign and date the form and return to me.
- Again, choosing not to participate will in no way negatively impact your grade in this course. Participation is voluntary.

Time Requirements/Documentation

- You will spend a minimum of 1 hour per week with your mentor but are encouraged to spend more time if needed.
- Mentees will complete a pre-survey and post-survey.
- Mentees will submit weekly reports on Angel Learning.
- A reflection paper summarizing your experience as a participant will be submitted 3 times during the semester.
- Mentor will initial the mentoring training curriculum acknowledging completion of weekly activities.

Documents

- You are now receiving copies of the documents you will use as participants in this study.
- Please review each document.
- Questions or concerns?
- Thank You!
APPENDIX B

MENTOR RECRUITMENT EMAIL

Good afternoon MGMT 2215 students,

I am your MGMT 2215 instructor, Michael Cook, also a University of Georgia doctoral student under the direction of principle investigator, Dr. Elaine Adams. I am contacting you regarding participation in a research study investigating the effects of peer-to-peer mentoring on technical education students. Participation is voluntary and you have been chosen for several reasons. First, you are nearing graduation by taking your capstone course and have demonstrated proficiency in attaining your educational goals. Secondly, you have a thorough understanding of the college and resources available. Lastly, as a management major, serving as a mentor will allow you to practice many of the skills you have acquired throughout the coursework you have already completed. Again, participation is voluntary and if you choose not to participate, it will have no bearing on your grade for the course.

There are several benefits for those that choose to participate. First, you will get to actively participate in research adding to the body of knowledge about technical education students. Secondly, as a MGMT 2215 student, you must demonstrate 12 competencies throughout the semester. This will be accomplished through research, projects, and presentations. For participating in this study as a mentor, you will fulfill the “training” competency required for the course.

There are no monetary rewards for participation. You will be asked to devote at least one hour per week serving as a mentor to two, first-year freshmen students throughout spring semester, 2014. A weekly curriculum of topics to cover will be provided and you are encouraged to meet on campus, telephone, or through email/texting. You will submit a brief report 3 times throughout the semester reflecting on your experience as a mentor and initial the mentoring curriculum on a weekly basis acknowledging the topics covered.

I encourage you to consider taking this opportunity to participate. Again, you will not be penalized or treated adversely should you choose not to participate. If you agree to serve, you will be required to attend a mentor training session on November 20th. Please email any questions or concerns about the study to me or Dr. Adams. For those that choose to participate, please confirm and I will send you a consent form that you can review and sign prior to beginning training on November 20th.

Thank You,
Michael Cook
770-412-4410
mcook@scitech.edu
Business Management Program Coordinator

Principle Investigator
Dr. Elaine Adams
adamsje@uga.edu
Researcher’s Statement
I am asking you to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called “informed consent.” A copy of this form will be given to you.

Principal Investigator: Michael Cook
Business Management
770-412-4410 or mcook@sctech.edu

Purpose of the Study
The purpose of this study is to explore the impact of peer mentoring on students' engagement, academic confidence, and satisfaction with their technical college experience.

Study Procedures
If you agree to participate, you will be asked to …

- Those who choose to participate as mentors from MGMT 2215, Team Project, will be required to attend a mentor training workshop during fall semester 2014. Mentors will be required to attend a mandatory meeting at the beginning of the spring semester 2015. Ground rules on the mentoring relationship, submission of documents, and tips for success will be shared with participants.

- Mentors are asked to meet weekly with their mentee. You should plan for a minimum of one hour per week and encouraged to meet more often. Meeting may take place face-to-face on campus, online, or over the phone. You will be given a weekly checklist of topics that should be covered but are encouraged to address additional topics as needed. Participants should expect to devote at least 20 hours over the course of the spring semester in their mentor role. Data for the study will be collected in several ways. Mentors will submit a periodic reflection paper (3) about the experience and initial the weekly mentor checklist acknowledging topics have been covered.

Risks and discomforts
- I do not anticipate any risks from participating in this research.

Benefits
- For those choosing to participate as a mentor, you will be participating in research that could possibly provide information about the benefits of peer mentoring in a technical college.
Incentives for participation
Mentor participation will satisfy the required “training” competency for MGMT 2215, Team Project.

Privacy/Confidentiality
The researcher will maintain participant confidentiality by assigning participant numbers to be used during the pre and post-survey data collection process. Students will be assigned an Angel login ID for electronic data submission over the course of the study. Data submitted on Angel will identify you as a participant but confidentiality will be maintained regarding the content of your submission. The researcher will not release identifiable results of the study to anyone without your written consent unless required by law.

Taking part is voluntary
Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision to participate will have no bearing on your grades or class standing. If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.

If you have questions
The researcher conducting this study is Michael Cook, doctoral student at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Michael Cook at mcook@stech.edu or at 770-412-4410 or the principle investigator, Dr. Elaine Adams at adamsje@uga.edu. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject’s Consent to Participate in Research:
To voluntarily agree to take part in this study, you must sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

_________________________   _______________________ _________
Name of Researcher  Signature  Date

_________________________ _______________________ _________
Name of Participant (Mentor)  Signature  Date

Please sign both copies, keep one and return one to the researcher.
APPENDIX D

UNIVERSITY OF GEORGIA
CONSENT FORM (Mentee)
A Case for Peer-to-Peer Mentoring in Technical Education

Researcher’s Statement
I am asking you to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called “informed consent.” A copy of this form will be given to you.

Principal Investigator: Michael Cook
Business Management
770-412-4410 or mcook@sctech.edu

Purpose of the Study
The purpose of this study is to explore the impact of peer mentoring on students’ engagement, academic confidence, and satisfaction with their technical college experience.

Study Procedures
If you agree to participate, you will be asked to …

- Those who choose to participate as mentees from MGMT 1120, Introduction to Business, you will be required to attend a mandatory meeting at the beginning of the spring semester 2015. Ground rules on the mentoring relationship, submission of documents, and tips for success will be shared with participants.

- Participants are asked to meet weekly in the mentor/mentee relationship. You should plan for a minimum of one hour per week and encouraged to meet more often. Meeting may take place face-to-face on campus, online, or over the phone. You will be given a weekly checklist of topics that should be covered but are encouraged to address additional topics as needed. Participants should expect to devote at least 20 hours over the course of the spring semester in their respective roles.

- Data for the study will be collected in several ways. Mentees will submit a pre and post survey, a brief weekly report providing details about the process, a periodic reflection paper about the experience, and initial the weekly mentee checklist acknowledging topics have been covered.

- Participants may opt out at any time during the process if discomfort arises without penalty. An example of a personal question posed on the survey is… Do you consider yourself a successful student? Yes / No If yes, why?
Risks and discomforts
- I do not anticipate any risks from participating in this research.

Benefits
- For those choosing to participate as a mentee, possible benefits include: a dedicated mentor to provide support, answer questions, and provide strategies for success.
- Additional benefits include participation in research that could possibly provide information about the benefits of peer mentoring in a technical college.

Incentives for participation
No academic or financial incentive will be provided for participation as a mentee.

Privacy/Confidentiality
The researcher will maintain participant confidentiality by assigning participant numbers to be used during the pre and post-survey data collection process. Students will be assigned an Angel login ID for electronic data submission over the course of the study. Data submitted on Angel will identify you as a participant but confidentiality will be maintained regarding the content of your submission. The researcher will not release identifiable results of the study to anyone without your written consent unless required by law.

Taking part is voluntary
Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision to participate will have no bearing on your grades or class standing. If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.
If you have questions
The researcher conducting this study is Michael Cook, doctoral student at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Michael Cook at mcook@sctech.edu or at 770-412-4410 or the principle investigator, Dr. Elaine Adams at adamsje@uga.edu. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject’s Consent to Participate in Research:
To voluntarily agree to take part in this study, you must sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

_________________________   _______________________ _________
Name of Researcher  Signature  Date

_________________________   _______________________ __________
Name of Participant (Mentee)  Signature  Date

Please sign both copies, keep one and return one to the researcher.
APPENDIX E

MENTORING PRE SURVEY

The purpose of this survey is an action research project designed to improve instruction in this class. Each survey will have a number recorded at the top right. You are asked to record this number for future reference to use when completing your post-survey. Your answers will in no way affect your grade in this class. Please answer all questions.

Age:

Gender:

# of College Credits Completed:

Race:

Current GPA (if applicable):

Degree program:

Career aspiration:

Do you consider yourself a successful student? Yes / No

If yes, why?

If not, why not?

Please answer the following questions regarding student engagement, academic confidence, and institutional satisfaction. Definitions and examples as they pertain to this study are provided to help you in formulating your answer.
Student engagement for this study is defined as the degree of involvement or interest you have for learning and involvement in your class, institution, or with other students. Examples of student engagement could include paying attention and participating in class, participating in college functions or student clubs, and forming friendships or study groups with fellow students.

On a scale from 1-10, please rate your personal level of student engagement with 1 being not engaged and 10 being extremely engaged.

1  2  3  4  5  6  7  8  9  10

Now that you have rated your level of student engagement, please describe in detail your personal level of student engagement.

Academic confidence for this study is defined as the level of belief about one's ability to succeed academically.

On a scale from 1-10, please rate your personal level of academic confidence with 1 being not confident and 10 being extremely confident.

1  2  3  4  5  6  7  8  9  10

Now that you have rated your level of your academic confidence, please describe in detail your personal level of academic confidence.
Institutional satisfaction for this study is defined as the degree of satisfaction you feel regarding your technical college. Satisfaction can be influenced by numerous factors. Examples include student support services, faculty advisement, clubs and activities, career services, and feelings that my success as a student is important to the college.

On a scale from 1-10, please rate your personal level of institutional satisfaction with 1 being not satisfied and 10 being extremely satisfied.

1  2  3  4  5  6  7  8  9  10

Now that you have rated your level of institutional satisfaction, please describe in detail your personal level of institutional satisfaction.

Do you think having a mentor/study partner in this class would benefit you? Why or why not?

Please describe and reflect on your college experiences to date (current college):

Why did you decide to take this class?

Thank you for your participation!
APPENDIX F

MENTORING POST SURVEY

The purpose of this survey is an action research project designed to improve instruction in this class. Please record the number from the survey you took at the beginning of the study in the top right corner of this page. Your answers will in no way affect your grade in this class. Please answer all questions.

Do you consider yourself a successful student? Yes / No

If yes, why?

If not, why not?

Please answer the following questions regarding student engagement, academic confidence, and institutional satisfaction. Definitions and examples as they pertain to this study are provided to help you in formulating your answer.

Student engagement for this study is defined as the degree of involvement or interest you have for learning and involvement in your class, institution, or with other students. Examples of student engagement could include paying attention and participating in class, participating in college functions or student clubs, and forming friendships or study groups with fellow students.
On a scale from 1-10, please rate your personal level of student engagement with 1 being not engaged and 10 being extremely engaged.

1 2 3 4 5 6 7 8 9 10

Now that you have rated your level of student engagement, please describe in detail your personal level of student engagement.

*Academic confidence for this study is defined as the level of belief about one’s ability to succeed academically.*

On a scale from 1-10, please rate your personal level of academic confidence with 1 being not confident and 10 being extremely confident.

1 2 3 4 5 6 7 8 9 10

Now that you have rated your level of your academic confidence, please describe in detail your personal level of academic confidence.
Institutional satisfaction for this study is defined as the degree of satisfaction you feel regarding your technical college. Institutional satisfaction can be influenced by numerous factors. Examples include the quality of student support services (the college makes you feel your success here is important and you are treated with respect), the physical environment (buildings/student areas), the quality of faculty interaction/advisement, availability of clubs and activities, and career services to find employment.

On a scale from 1-10, please rate your personal level of institutional satisfaction with 1 being not satisfied and 10 being extremely satisfied.

1  2  3  4  5  6  7  8  9  10

Now that you have rated your level of institutional satisfaction, please describe in detail your personal level of institutional satisfaction.

Are you involved in any extracurricular activities through school? Yes / No
How much time outside of class do you spend on campus per week?
Less than 2 hours  2-5 hours  5-10 hours  more than 10 hours

If you participated in the mentoring program, what if anything do you feel you gained from it?
How did you and your mentor spend your time?

Would having a mentor be a useful thing in other classes? Why or why not?

Would you recommend that other students taking this class have a mentor? Why or why not?

Please describe your experience in this class in detail:

Thank you for your participation!
APPENDIX G

MENTEE WEEKLY REPORT

Please submit report using the Angel drop box.

Date___________________________________________

Student ID________________________________________________

1. How long did you communicate with your mentor during the past week.
   ○ No contact
   ○ Less than 30 minutes
   ○ 30 minutes to an hour
   ○ One hour or greater

2. How did this communication take place?
   ○ Face-to-Face
   ○ Social Media
   ○ Email
   ○ Phone/Text
   ○ Combination

3. Who initiated contact for the meeting?
   ○ I did
   ○ My mentor

4. Where did the mentoring interaction take place?
   ○ on campus
   ○ off site

5. What was discussed during the meeting(s)?

6. Describe changes would you like to see made to the mentoring process.
## APPENDIX H
MENTORING TRAINING CURRICULUM

<table>
<thead>
<tr>
<th>Mentor Training Curriculum</th>
<th>Topic</th>
<th>Description</th>
<th>Uses by Mentees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation Series</td>
<td>Resources for student success</td>
<td>Provides mentors an overview of student resources at SCTC.</td>
<td>New students will better understand support services provided by SCTC, TAP, Special Population, IPASS, and the Tutoring Center.</td>
</tr>
<tr>
<td>Orientation Series</td>
<td>Embracing the college experience</td>
<td>Mentors will learn tips for assimilating into campus life, college clubs and intramural sports.</td>
<td>Understanding about the rigors of college and how to become involved in college clubs and sports.</td>
</tr>
<tr>
<td>Orientation Series</td>
<td>Understanding your program of study</td>
<td>An overview of student’s program of study and program expectations.</td>
<td>New students will enter program of study with a clearer understanding of program expectations and requirements.</td>
</tr>
<tr>
<td>Orientation Series</td>
<td>Funding your education-Financial aid and student loans</td>
<td>Mentors will learn available financial aid for education and applying for grants and scholarships.</td>
<td>New students will learn how financial aid is administered and how to apply for grants and scholarships.</td>
</tr>
<tr>
<td>Orientation Series</td>
<td>Using Banner Web and Angel</td>
<td>Managing your academic career using Banner Web and Angel (LMS)</td>
<td>New students will be able to effectively use Banner Web for registration and financial aid as well as a working knowledge of student features in ANGEL.</td>
</tr>
<tr>
<td>Orientation Series</td>
<td>Using your library for success</td>
<td>Mentors will learn how to share services of the library for success</td>
<td>New students will understand the various services offered by the library and how to use GALILEO</td>
</tr>
<tr>
<td>College Success Series</td>
<td>Using technology for success</td>
<td>The latest technology will be discussed as ways to apply it to your academic career.</td>
<td>New students will have a better understanding of technology related to academic learning.</td>
</tr>
<tr>
<td>College Success Series</td>
<td>Interpersonal skills</td>
<td>An informative presentation on people skills and tips for developing those skills.</td>
<td>New students will have a better understanding of “soft” skills and getting along with others.</td>
</tr>
<tr>
<td>College Success Series</td>
<td>Effective writing, citing, and research skills</td>
<td>Mentor training on writing techniques, MLA citations, and topic research tips.</td>
<td>New students will understand how to construct a research paper, proper citations, and how to research a given topic.</td>
</tr>
<tr>
<td>College Success Series</td>
<td>Becoming a better speaker and effective presentations</td>
<td>Guidelines for giving effective oral and visual presentations.</td>
<td>New students will become more effective presenters.</td>
</tr>
<tr>
<td>College Success Series</td>
<td>Becoming a better test taker</td>
<td>Mentors will receive training on how to prepare and perform better on tests.</td>
<td>Student’s study skills and test scores will improve as a result of the workshop.</td>
</tr>
<tr>
<td>Life Skills Series</td>
<td>How to effectively manage school, career, and family responsibilities</td>
<td>Mentors will learn information on managing the many responsibilities faced by today’s college student.</td>
<td>New students will be able to better cope with the many responsibilities required of today’s student and learn multi-tasking.</td>
</tr>
<tr>
<td>Life Skills Series</td>
<td>Translating work ethics into career success</td>
<td>Mentor training on work ethics desired by employers.</td>
<td>Mentees will understand what work ethics are and how these translate to career success.</td>
</tr>
<tr>
<td>Leadership Series</td>
<td>Preparing to be a leader</td>
<td>Mentors will review leadership principles.</td>
<td>New students will gain a better understanding of leadership principles.</td>
</tr>
<tr>
<td>Leadership Series</td>
<td>Ethical leadership</td>
<td>Mentors will learn about exercising ethical leadership in today’s work force.</td>
<td>New students will be able to make ethical leadership decisions in various situations.</td>
</tr>
</tbody>
</table>
APPENDIX I
MENTOR WEEKLY RESPONSIBILITIES

<table>
<thead>
<tr>
<th>WEEK</th>
<th>ACTIVITY</th>
<th>DATE COMPLETE</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mentor preparation</td>
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<tr>
<td>2</td>
<td>Ice breaker and establishing communication channels with mentee (group meeting)</td>
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<td></td>
<td>Establish meeting times and location</td>
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<td></td>
<td>Discuss resources for student success (Tutoring Center, scholarships, IPASS, Special Populations, Student Assistance Program (TAP), and Career Services)</td>
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<td></td>
<td>Encourage mentee(s) to ask questions</td>
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<td>Share vision of the relationship and expectations for mentee</td>
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<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td><strong>GOAL</strong></td>
<td><strong>students will be knowledgeable of the various resources available at SCTC and freely ask questions</strong></td>
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<tr>
<td>3</td>
<td>Discuss college clubs, sports, and involvement at SCTC and encourage participation (Student Government, Phi Beta Lambda, DECA, Skills USA, Basketball, Spanish Club)</td>
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<td>Field questions from mentee(s)</td>
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<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td><strong>GOAL</strong></td>
<td><strong>students will have an understanding of the various extra-curricular activities offered at SCTC</strong></td>
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<tr>
<td>4</td>
<td>Review the Business Management curriculum for the degree, diploma, and certifications. Make suggestions of course sequences.</td>
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<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td><strong>GOAL</strong></td>
<td><strong>students understand their program of study and can create their academic schedule.</strong></td>
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<tr>
<td>5</td>
<td>Review Banner Web and Angel Learning: Emphasize academic career management and share online course success tips. Have student demonstrate use of both.</td>
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<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit reflection paper online</td>
<td></td>
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</tr>
<tr>
<td><strong>GOAL</strong></td>
<td><strong>students will be able to navigate their Banner Web account and understand how to register, review transcripts and financial aid information. Students will also have a better knowledge of using Angel Learning for online coursework.</strong></td>
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Name ______________________________
<table>
<thead>
<tr>
<th></th>
<th><strong>GOAL</strong>- students will have a better understanding of research techniques using library resources and demonstrate how to use GALILEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Share research tips on using the college library services and GALILEO and have student demonstrate a search using GALILEO</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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</tbody>
</table>

**GOAL**- students will have a better understanding of research techniques using library resources and demonstrate how to use GALILEO

<table>
<thead>
<tr>
<th></th>
<th><strong>GOAL</strong>- students will understand MLA formatting and have a greater understanding on how to construct a research paper</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>Discuss effective writing techniques and provide mentees with information on using MLA formatting. Share examples of works demonstrating proper MLA usage.</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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</tbody>
</table>

**GOAL**- students will understand MLA formatting and have a greater understanding on how to construct a research paper

<table>
<thead>
<tr>
<th></th>
<th><strong>GOAL</strong>- students will become more competent public speakers and be able to create visual aids to support presentations.</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>Share experiences for performing effective presentations. Provide tips for public speaking and presentation aids. Stress self-confidence and professional appearance.</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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**GOAL**- students will become more competent public speakers and be able to create visual aids to support presentations.

<table>
<thead>
<tr>
<th></th>
<th><strong>GOAL</strong>- students will learn test taking strategies as well as understand their learning style. Students will prepare for tests</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>Discuss learning strategies for success on exams and share your study practices. Have mentee take a learning style assessment to understand their learning style and discuss how they can use the style for success</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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</tbody>
</table>

**GOAL**- students will learn test taking strategies as well as understand their learning style. Students will prepare for tests

<table>
<thead>
<tr>
<th></th>
<th><strong>GOAL</strong>- students will learn multi-tasking strategies and how to set priorities. Students will understand the importance of time management and create a weekly schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Discuss how to effectively manage work, family, and academic responsibilities. Mentors will share time management strategies and creating a priority list.</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit reflection paper online</td>
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</tbody>
</table>

**GOAL**- students will learn multi-tasking strategies and how to set priorities. Students will understand the importance of time management and create a weekly schedule
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<tbody>
<tr>
<td>11</td>
<td>Discuss the ten college work ethics taught at SCTC and their importance as a student and employee. Have the mentee provide examples of how they are/have used each one of the ten work ethics.</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
</tr>
<tr>
<td><strong>GOAL</strong></td>
<td>students will provide examples of use of the ten work ethics and understand the importance of each in regards to being a student and employee</td>
</tr>
<tr>
<td>12</td>
<td>Mentors will discuss the importance of communication skills and assess mentees verbal and non-verbal communication. Strategies for improvement will be provided.</td>
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<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
</tr>
<tr>
<td><strong>GOAL</strong></td>
<td>students will learn the importance of communication skills and develop their skills with mentor provided feedback</td>
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<tr>
<td>13</td>
<td>Mentors will discuss the importance of leadership and leadership models. Mentees will take a leadership assessment to determine their leadership style</td>
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<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
</tr>
<tr>
<td><strong>GOAL</strong></td>
<td>students will have an understanding of leadership, leadership models, and their leadership style</td>
</tr>
<tr>
<td>14</td>
<td>Leadership training continued. Mentors will discuss the importance of leadership and leadership models. Mentees will take a leadership assessment to determine their leadership style</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will have an understanding of leadership, leadership models, and their leadership style</td>
</tr>
<tr>
<td>15</td>
<td>Mentors will share information about articulation agreements with four-year institutions and various funding options for continued education</td>
</tr>
<tr>
<td></td>
<td>Field questions from mentee(s) and ask probing questions</td>
</tr>
<tr>
<td></td>
<td>Ensure mentee(s) submit weekly mentoring report online</td>
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<tr>
<td></td>
<td>Ensure mentee(s) submit reflection paper online</td>
</tr>
<tr>
<td><strong>GOAL</strong></td>
<td>students will have an understanding of educational opportunities and funding sources</td>
</tr>
<tr>
<td>16</td>
<td><strong>Mentoring Program Completed</strong></td>
</tr>
</tbody>
</table>
APPENDIX J
MENTEE WEEKLY RESPONSIBILITIES

<table>
<thead>
<tr>
<th>WEEK</th>
<th>ACTIVITY</th>
<th>DATE COMPLETE</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Complete pre-survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ice breaker and establishing communication channels (group meeting)</td>
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<td></td>
<td>Establish meeting times and location</td>
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<td></td>
<td>Ask mentor questions</td>
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<td></td>
<td>Share vision of the relationship and expectations</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td><strong>GOAL:</strong> students will be knowledgeable of the various resources available at SCTC and freely ask questions</td>
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<tr>
<td>3</td>
<td>Consider participation in college clubs, sports, and clubs at SCTC.</td>
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<td></td>
<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td><strong>GOAL:</strong> students will have an understanding of the various extra-curricular activities offered at SCTC</td>
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<tr>
<td>4</td>
<td>Review the Business Management curriculum for the degree, diploma, and certifications.</td>
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<td></td>
<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td><strong>GOAL:</strong> students understand their program of study and confidence in creating their academic schedule.</td>
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<tr>
<td>5</td>
<td>Explore Banner Web and Angel Learning: Plan courses for upcoming semester</td>
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<td></td>
<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td>Submit reflection paper online</td>
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<tr>
<td></td>
<td><strong>GOAL:</strong> students will be able to navigate their Banner Web account and understand how to register, review transcripts and financial aid information. Students will also have a better knowledge of using Angel Learning for online coursework.</td>
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<tr>
<td>6</td>
<td>Learn research tips using the college library services and demonstrate use of GALILEO</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td><strong>GOAL:</strong> students will have a better understanding of research techniques using library resources and demonstrate how to</td>
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<tr>
<td>7</td>
<td>Learn effective writing techniques and how to properly use MLA formatting</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will understand MLA formatting and have a greater understanding on how to construct a research paper</td>
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<tr>
<td>8</td>
<td>Learn how to give and effective presentations. Discuss public speaking</td>
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<td></td>
<td>and presentation aids.</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will become more competent public speakers and be able to create visual aids to support presentations.</td>
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<tr>
<td>9</td>
<td>Explore learning strategies for success on exams and developing study</td>
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<td></td>
<td>practices. Identify your learning style and how to prepare accordingly</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will learn test taking strategies as well as understand their learning style. Students will prepare for tests</td>
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<tr>
<td>10</td>
<td>Create strategies to effectively manage work, family, and academic</td>
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<td>responsibilities. Identify priorities and create checklists</td>
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<td></td>
<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<td></td>
<td>Submit reflection paper online</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will learn multi-tasking strategies and how to set priorities. Students will understand the importance of time management and create a weekly schedule</td>
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<tr>
<td>11</td>
<td>Discover the ten college work ethics taught at SCTC and how they can be</td>
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<td></td>
<td>used as a student and employee. Provide scenarios for their use</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will provide examples of use of the ten work ethics and understand the importance of each in regards to being a student and employee</td>
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<tr>
<td>12</td>
<td>Practice verbal and non-verbal communication skills. Learn strategies for</td>
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<td>improvement</td>
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<td>Ask mentor questions, share concerns</td>
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<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will learn the importance of communication skills and develop their skills with mentor provided feedback</td>
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<tr>
<td>13</td>
<td>Learn about the importance of leadership and understand the leadership</td>
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<td></td>
<td>models. Determine your leadership style</td>
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<td>Ask mentor questions, share concerns</td>
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<td>Post weekly report on Angel Learning</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>students will have an understanding of leadership, leadership models, and their leadership style</td>
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<tr>
<td>14</td>
<td>Leadership training continued. Learn about the importance of leadership and understand the leadership models. Determine your leadership style</td>
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<td></td>
<td><strong>GOAL-</strong> students will have an understanding of leadership, leadership models, and their leadership style</td>
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<td>15</td>
<td>Learn about articulation agreements with four-year institutions and various funding options for continued education</td>
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<td>Ask mentor questions, share concerns</td>
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<td></td>
<td>Submit reflection paper online</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complete post-survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>GOAL-</strong> students will have an understanding of educational opportunities and funding sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td><strong>Mentoring Program Completed</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX K

MENTEE REFLECTION REPORT TEMPLATE

Please compose a 1-2 page Word document answering the following questions regarding your experience thus far in this mentoring study. Be sure to answer the following.

1. Please describe in detail your personal level of student engagement thus far from participating in this mentoring study and include examples if possible.

2. Please describe in detail your personal level of academic confidence thus far from participating in this mentoring study and include examples if possible.

3. Please describe in detail your personal level of institutional satisfaction thus far from participating in this mentoring study and include examples if possible.

4. Please describe any benefits you feel you have experienced from participating in this mentoring study.

5. Please describe any changes you would like to see made to this mentoring study.

6. Please share any additional thoughts you have regarding this mentoring study.
APPENDIX L

MENTOR REFLECTION REPORT TEMPLATE

Please compose a 1-2 page Word document answering the following questions regarding your experience thus far in this mentoring study. Be sure to answer the following.

1. Please share your thoughts thus far regarding serving as a mentor in this research study.

2. Please describe any changes you would like to see made to this research study (curriculum, weekly checklist, etc.).

3. Please describe what you feel is working well in the mentoring relationship.

4. Please describe what you feel is not working in the mentoring relationship.

5. Please share any additional thoughts regarding serving as a mentor in this research study.
APPENDIX M

SITE AUTHORIZATION LETTER

30 October, 2014

Michael Cook
Business Department
Southern Crescent Technical College

Subject: Permission to conduct active research at Southern Crescent Technical College

Dear Mr. Cook:

I am in receipt of your request to conduct active research among students at Southern Crescent Technical College. It is my understanding from our discussions that you intend to use students in your classes, on a voluntary basis, to conduct active research principally on peer n

Permission is hereby granted to go forward with your proposal, using students at SCTC with the following provisions:

You are free to use students on a strictly voluntary basis. You may not offer or deliver a reward for participation, or a punishment for students failing to participate. Students who volunteer must be able to subsequently discontinue participation without penalty of any kind.

Publication of your results must maintain anonymity of the participants.

All aspects of your research must fall within approved terms and conditions of the University of Georgia IRB approval process.

I would be very interested in seeing the final results of your research, especially to determine whether you have arrived at a “value added” proposition in terms of student completion or student success. I wish you good luck in your research endeavors, and I look forward to seeing your results. Let me know how I can be of further assistance in your studies.

Sincerely,

Randall L. Peters
President

Office of the President

Southern Crescent Technical College

Butts County Center
302 S Main St
Jackson, GA 30233
770.365.4720

Floyd County Center
1576 Highway 19 South
Thomaston, GA 30286
706.640.4149
800.702.9681

Griffin Campus
501 Valory Road
Griffin, GA 30223
770.228.1348
877.897.0006

Jasper County Center
112 Industrial Park Drive
Monticello, GA 31064
706.468.9830

Taylor County Center
196 East Main Street
Butler, GA 30007
478.862.3334

www.sctech.edu

Southern Crescent Technical College is a unit of the Technical College System of Georgia and an Equal Opportunity Institution

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APPENDIX N

CODE OF CONDUCT AGREEMENT

Peer-to-Peer Mentoring Agreement

Mentor: ____________________________________________________________________

Mentee: ___________________________________________________________________

We agree, as part of participation in this peer-to-peer mentoring study, to abide by the following rules. We further agree that if one or the other should violate one of the rules of this agreement, we will immediately inform the researcher so that they can find a solution to the issue.

1. There will be no meetings scheduled at one another’s place of residence.
2. Mentors/mentees will treat each other with respect and professionalism at all times.
3. There will be no exchange of money or gifts.
4. The mentor will not act as an advocate for a mentee directly to an instructor. If a mentee has an issue with an instructor or other staff member, the mentor will direct them to the appropriate department for assistance.
5. Mentors/mentees will not become involved in the conflicts the mentor/mentee has with another person.
6. The mentor is not to tell the mentee what to do or offer advice for major life decisions outside the scope of this study.
7. The mentor will not ask the mentee to run any errands nor will the mentee ask the mentor to run any errands.
8. There will be no romantic involvement between a mentor and a mentee.
9. Mentors/mentees will keep details of the mentoring relationship confidential. Mentors will not divulge mentee grades, progress or performance.
10. Mentors/mentees will provide truthful feedback about the mentoring relationship throughout this study when using the assigned instruments.
By signing, we understand that a violation of one or all of the above rules must be reported to the researcher conducting the Peer-to-peer Mentoring Study and that such violation could result in the suspension or expulsion from the study.

Mentor Signature

Date

Mentee Signature

Date
### APPENDIX O

#### QUALITATIVE DATA CODEBOOK

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Text Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>Going good then stops. Feel like I am learning</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>use Angel the correct way and how to submit my homework through Angel the correct way</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I feel that this experiment is beneficial when it comes to having the confidence that I can do this and that</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>decent level of academics even though I've have yet to learn some things about how certain programs work or what is beneficial for me.</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I got the feeling that I am on the right track to succeed in the career</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>To have a person, who has experienced in what I am trying to do is encouraging</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I'm very confident at what I'm going for and I am quite open for any academic ideas from my mentor</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I am extremely academically confident this semester.</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>no change</td>
<td>I honestly haven't learned a great deal as this is my third year at this school</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>Very Confident</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I feel like my confidence is going up.</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>My homework and test scores have been okay this semester</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>Gave a bit of a confidence boost to my decisions.</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>no change</td>
<td>confidence hasn't really changed</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>my confidence in math has gone up, as I occasionally help my mentor</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I feel more confident being in the mentoring program. Some of the stuff we cover are things I already knew but some is new</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>mentor</td>
<td>help them out if they're struggling in a class course</td>
</tr>
<tr>
<td></td>
<td>characteristics</td>
<td></td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>my academic level of confidence is good so far because I'm getting used to the college's schedule and routine bit by bit</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>mentor</td>
<td>Even though my mentor had no idea what I was talking about she still was interested in it</td>
</tr>
<tr>
<td></td>
<td>characteristics</td>
<td></td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>on a scale of one to ten, it's a nine because during the past few days I was asked about what I want to be and my answer was a paleontologist</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>level of academic confidence so far has increased</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>I think I can do better in my class because I know more about things at the college to help me</td>
</tr>
<tr>
<td>Academic Confidence</td>
<td>increase</td>
<td>My level of academic confidence has risen from participating in this mentoring experiment</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Doubt</td>
<td>goal</td>
<td>My experience with the program has shown me very little</td>
</tr>
<tr>
<td>Doubt</td>
<td>attainment</td>
<td>afraid that, so far, I can't say I've been an ideal</td>
</tr>
<tr>
<td>Doubt</td>
<td>goal</td>
<td>if they don't ask for help soon they'll never make it through say a university or in the real world</td>
</tr>
<tr>
<td>Doubt</td>
<td>attainment</td>
<td>Don't know not must is working</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>Communication is the key to good help</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>Called to make sure I was alright and encouraged me to keep focus.</td>
</tr>
<tr>
<td>Goals</td>
<td>achieve</td>
<td>I have a better view of meeting the goals that I have set to accomplish</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>They always ask me if I have any questions and how I am doing in my classes.</td>
</tr>
<tr>
<td>Goals</td>
<td>achieve</td>
<td>Since in this mentor program I am now setting goals for myself to accomplish and I know that I am going to complete the goals I have set for myself.</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>students who are new and don't know anyone would appreciate having someone to help them</td>
</tr>
<tr>
<td>Goals</td>
<td>achieve</td>
<td>This program should be used by all new students because it gives them good information to help them do well in classes.</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>I was stressing out about school work load and the classes I am taking. Thanks to my mentor, I feel that I am able to complete them now.</td>
</tr>
<tr>
<td>Goals</td>
<td>help</td>
<td>I did not do good a another school and wonder if it would have been different if they had a program like this</td>
</tr>
<tr>
<td>Goals</td>
<td>achieve</td>
<td>mentor program has motivated me to do better and able to focus better on what I need to accomplish my goals</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>best part about being a mentor is I can give advice and guidance to the mentee</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I feel the introduction part, which is the initial commitment, the sign up, to the research and the meet and greet are a great start.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I enjoy helping and working with others in any way I can, because it is very rewarding to me</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>so far no changes except for mentor asking their mentees more often about what they want to do</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>it's a mixed bag for me because I'm always talking to my mentor about what I'm up to or what going on at the school</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>issues such as not being able to reach the mentee or interact effectively at times</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>I feel like this program is geared more for early students and not for seniors.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>Maybe a bit more information that is viable to seniors.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>Having all parties involve to their parts has worked out a lot better since I last reported</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>Through signing up, a person has to commit. I need to be organized, and timely with the requirements</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>being in the mentor program are somebody is there to support me and answer questions</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>The opportunity of meeting new people and being able to discuss different topics to enhance their knowledge and mine as well is great</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>Any questions I have, he answers and makes sure I understand.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>which topics they need and want information on for an enhanced understanding</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>To know my input may one day help other students is a boost to finish the study.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>the benefits are excellent so far as of now</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>To have an outlet, a fellow student as an example.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>Angel and banner information in the earliest modules since they are very important to student success.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>t is a good idea. I would like to see it continue</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>learn from someone who has already been where I am</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>knows what is expected to succeed</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>changes I would like to see is that the communication between mentors and mentee's</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>setting mentees with mentors based on schedule rather than a random list generator</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>many other ways to communicate and share knowledge such as through email conversation</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I'm pretty satisfied with the mentoring program at this point.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>some of the discussion or topic we have for that week do not last for thirty minutes</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>should at least meet twice a week</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>at least one of the meetings everyone should meet including the instructor so you can put you input on some ideas or topic that you think need to be really talked about</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>Making the weekly checklist more accessible more convenient therefore saves a lot of time for all parties.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>agenda and a schedule already made we can go to our employer to let them know in advance that we have plans for a particular day so we can be off in order to attend the meeting.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>instructor should already have and agenda and a schedule for each day and time of having a meeting instead of the mentee or the mentor calling or texting each other to set up a meeting</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>Not only has my stress level decreased from worrying over school work or classes, my mentor has helped me when I am having trouble with that.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>those students who do not truly need the mentoring should probably be passed up</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I also enjoy learning information that I was not aware of from my mentees.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>this program has a lot of information that they already know</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Contact is the big problem right now</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>the information is great and useful</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Better but if mentor don't stay up to date with you. And you just see them whenever isn't good for learning</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Timing isn't on some of the mentor time clock</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I enjoy talking to the mentees about what general information they may have on different topics</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>More communication</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I am more enthusiastic about being a mentor lately because my mentees check in on a regular</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Communication isn't there. Missing out</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>mentors could build self-confidence and self-esteem for the mentees</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>come up with ways to help the student if they feel what they're doing is not beneficial to them</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>I feel that I have not benefit from anyone but NET</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>only get in touch as I walk the halls or the library</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>the mentor program has had some pros and cons</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I have learned and now understand how to really use a lot of useful tools at the school</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>be more convincing so that every mentee could love it for what it is and not look down on it as a waste of time</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>mentor should be doing the same thing to help us pass our class and to be successful</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>The interaction is good, it has been a networking tool.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>have an outlet, things in common with others</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I like the networking system, I have gotten nuggets here and there from others</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>this idea further with the reflection documents</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>My mentor is very helpful and contacts me several times a week to remind me to turn in reports and asks if I have questions</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>after this experiment, the mentoring program will be offered at Southern Crescent Technical College</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Negative</td>
<td>Having the mentor's do the same, I feel that it would help them to remember to make it a team effort instead of one-sided.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>To have the fellowship, unity</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>benefits I think I have gotten from the mentoring program are not being so shy and knowing about different student support on campus</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>I like having a mentor to help me and answer any questions that may come up</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Positive</td>
<td>provided some interesting reviews such as the learning types</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Neutral</td>
<td>at the same time I am discussing about how my classes are going, what subject trouble me the most, and most of all what classes I'm taking in the summer</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>I am very satisfied with the school</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>As long as I listen to my instructor and my mentor I know I will succeed in my career choice</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I've benefited from the study largely in part because I've made a friend</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I've gotten along with my fellow mentee and got to know a lot of things</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>My level of institutional satisfaction is the same.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>they are concerned about the students</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>mostly likely answer for this would be well fair</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I am getting information to help me be successful at school and for life</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>apathetic about the school itself</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I am glad that there is any resource for me to use to continue my education</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I think making the weekly checklist more accessible more convenient therefore saves a lot of time for all parties.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>or the most part, really satisfied at my school</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>There are some minor things, but that's life</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>feel that participating in this mentoring experiment has helped me to be able to not stress so much over school work</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>mentees seem to be very receptive and the information is very helpful to them</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>institutional satisfaction has stayed the same</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>I like the college</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>I am more satisfied with my school from being in the program.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>genius idea in my opinion</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>activities</td>
<td>it allow people to get together and form relationships.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>satisfied with the experiment,</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>This research study is very beneficial to not only the mentee but also to the mentor.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>the program is growing into a fairly efficient format</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>the school is doing a good job</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>it's a wonderful experiment and I think everyone should try it out</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>activities</td>
<td>have taken on a work study program in addition</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>The college has many people and services to help the students who need it</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>none simply because I haven't got to that subject with my mentor as of yet</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>Very Satisfied. I have learned quite a bit about special services and the net.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>Very Satisfied. I have learned quite a bit about special services and the net</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>I have learned of several services offered by my school.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>using the library, the NET, and different tutoring services</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>Helps better understand all of the things the college has for students.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>Satisfaction and confidence remain high with the institution.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>study</td>
<td>program is exceptional</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>resources</td>
<td>i will have to get tutoring when it is time for my math.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>school</td>
<td>averagely satisfied since my last meeting was a no show and also because I and my mentor didn't really discuss about any institution</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>If we don't meet at school, we will email or talk on the phone</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>Fully Engaged</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>learn new things from another's perspective</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>really makes an effort to meet and to make sure that you understand what is going on with the school and through courses</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>I would describe my level of student engagement as high</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>event</td>
<td>description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>makes an effort to meet and to make sure that you understand what is going on with the school and through courses</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>coursework</td>
<td>discussing the courses that I have taken and the ones that are best for me to take to succeed in being a good leader</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>coursework</td>
<td>I am open to suggestions, and corrections</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>I am learning, for a project to work, there must be an effort made</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>would boost the rate of graduates and students enrolling rather than students withdrawing</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>college activities</td>
<td>I feel that it benefits me to have someone to help me with school work that I don't understand and any activities that the school is holding</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>coursework</td>
<td>stuff that I did not know when I first started here at the college</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>visit my mentor each time after class whether it be on campus or off campus</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>normally a shy person but feel like I am growing out of it</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>I have liked the program so far. I feel like I am more engaged meeting every week with my mentor.</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>I've benefited from the study largely in part because I've made a friend</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>I have been involved and currently still am involved in several clubs and programs</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>all but one of the meetings with my mentor</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>engagement form this study has been average</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>college activities</td>
<td>I have learned a lot about the college so far from my mentor and know about clubs and programs there to help students do good.</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>I wanted to be a part of the study, and I believe in finishing my projects</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>I also feel like my people skills are getting better too. I don't feel as shy as I did.</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>college activities</td>
<td>joined the National Technical Honors Society</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>The group meetings we have had are fun. I like seeing how everyone in the group is doing</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>meeting</td>
<td>I'm also talking to my mentor more often than usual</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>involved</td>
<td>it's on average as of now because I'm getting very used to the program</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>coursework</td>
<td>I am learning a great deal about the business management program</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>college activities</td>
<td>I have been studying in the library and am a a of two clubs</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>allow people to get together and form relationships</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>social</td>
<td>very fun</td>
</tr>
</tbody>
</table>
I have been spending a lot of time on campus this semester. Level of engagement is very good so far as I have learned so much about him and his interests. My original two mentees make it a point to step by for weekly visits, no matter their busy schedule. I've learned to get along with people different from the one I'm used to. I feel that it benefits me to have someone to help me with school work that I don't understand and any activities that the school is holding. At first my thoughts about were of low expectations since I already have plans on what classes to take, so right now I've kind of turned down idea until due time. I feel I am wasting her time more than she is assisting me. If you want us to do the mentor thing, it would be easier if they come around more.
APPENDIX P

IRB APPROVAL

November 5, 2014

Dear Joyce Adams:

On 11/5/2014, the IRB reviewed the following submission:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Study:</td>
<td>A Case for Peer-to-Peer Mentoring in Technical Education</td>
</tr>
<tr>
<td>Investigator:</td>
<td>Joyce Adams</td>
</tr>
<tr>
<td>IRB ID:</td>
<td>STUDY00001400</td>
</tr>
<tr>
<td>Funding:</td>
<td>None</td>
</tr>
<tr>
<td>Grant ID:</td>
<td>None</td>
</tr>
</tbody>
</table>

The IRB approved the protocol from 11/5/2014 to 11/4/2015 inclusive. Before 11/4/2015 or within 30 days of study closure, whichever is earlier, you are to submit a continuing review with required explanations. You can submit a continuing review by navigating to the active study and clicking Create Modification / CR.

If continuing review approval is not granted before the expiration date of 11/4/2015, approval of this study expires on that date.

To document consent, use the consent documents that were approved and stamped by the IRB. Go to the Documents tab to download them.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Larry Nackerud, Ph.D.
University of Georgia
Institutional Review Board Chairperson

Phone 706-542-3109
Fax 706-542-3650
Office of the Vice President for Research
Institutional Review Board

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