The Effect of Mentoring on the Academic Success of College Sophomores

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THE EFFECT OF MENTORING ON THE

ACADEMIC SUCCESS OF COLLEGE SOPHOMORES

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ABSTRACT

EFFECT OF MENTORING ON THE ACADEMIC
SUCCESS OF COLLEGE SOPHOMORES

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A review of the higher education literature indicates that the majority of retention research has focused on first-year students and that additional research is needed for other class levels – particularly sophomores (Graunke & Woosley, 2005). However, the reality is that sophomores benefit from a minimal number of special programs, minimal contact with faculty and others in leadership positions, and minimal attention from student affairs personnel (Anderson & Schreiner, 2000). An unintended consequence of this reduced attention is higher than expected rates of sophomore attrition.

This exploratory research study employs a quasi-experimental quantitative research design to evaluate the results of a mentoring program for sophomore students. The instruments utilized to support the study are the "Student Role Commitment Scale" and the "Academic Skills Comfort Scale" from *the Transition to College Inventory (TCI)*. Academic success was assessed using cumulative GPA and retention of students from sophomore to junior status.

The findings of the study are analyzed and presented, and areas for future research are highlighted. The findings indicate that mentoring can have a significant impact on sophomore student academic success, which can lead to higher grades and persistence.

Finally, the study suggested directions for continued research and actions that might

taken to increase student academic success in higher education settings.

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INTRODUCTION

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Sophomore success.

Minimal information and research is available in higher education literature; based on the sparse information research available, sophomores frequently face academic difficulties (Gaunke & Woosley, 2005; Pattengale & Schreiner, 2000). According to Pattengale and Schriener (2000), a student's second year of college may be the period of time in which the student disengages from academic life resulting in a negative impact on their grades and degree progress.

> "Our years of experience and direct observation on campuses across the nation have led us to conclude that sophomores receive the least attention of any class. While a growing number of institutions are experiencing some success in reducing first-year attrition, the question remains has this successful programming merely postponed the inevitable attrition to the sophomore year (pr. 6)

A literature review indicated that the majority of retention research has focused on first-year students and that additional research is needed for other class levels – particularly sophomores (Graunke & Woosley, 2005). In general, higher education research literature suggested that the needs of sophomores differ from students at other class levels. Further, the needs of sophomores are often inadvertently neglected by their college or university.

Pattengale and Schreiner (2000) commented that the second year presents a dilemma for higher education institutions. Because higher education administrators, in general, believe they have been successful with persistence preventative measures with first-year students, leadership appears to have relaxed its support for students in their second year. The perception after the first year is often that the institution has succeeded in retaining students; the institution tends to focus resources on the next cohort of entering freshmen rather than developing programs and support services for the student in his or her second year. Flanagan's (1990) research on sophomore persistence indicated that colleges and universities tend to endorse the "front loading" approach, thereby failing to continue support programs into the sophomore year. Continued services and/or programming are typically not available for students in their seSophomores are often in transition from general education courses to those specifically required for a major, minor, and/or program (Anderson & Schreiner, 2000). Challenges and concerns such as indecision about choosing or sticking with a major may cause anxiety thus adversely affecting the student's success. Further, because sophomores are typically not fully into their program or major, they often receive little attention from faculty (Pattengale & Schreiner, 2000). The reality is that sophomores benefit from a minimal number of special programs, minimal contact with faculty and other leadership positions, and minimal attention from student affairs personnel (Anderson & Schreiner, 2000). An unintended consequence of this reduced attention is higher than expected rates of sophomore attrition.

Even though a number of higher education institutions have implemented programs and support services for first-year students that have increased retention,

leadership is faced with declining numbers of persisting sophomores. As Pattengale
Schreiner (2000) noted: "Institutions may be on the road to reducing first-year
but without providing ongoing programs, services, and support to sophomores, efforts
seem to be only postponing the inevitable until the end of the sophomore year" (p. vi).
Although higher education administrators have focused extensively on the first-year
student, including special programs for this population of students, sophomores go
ignored at many higher education institutions, thus postponing a portion of that
institution's attrition to the second year (Pattengale & Schreiner, 2000).

The "sophomore slump" has been described as a higher attrition rate
experienced from the second to the third year of college (Pattengale & Schreiner,
2000). While student departure from the institution, which also includes transferring
to another college or university, is symptomatic of the "slump," there are additional
indicators to include lack of interest in their classes and feeling disconnected from the
institution. As a result of the diminished attention in the second-year, this research
indicates that sophomores who persist are often apathetic, lack motivation, and
demonstrate declining grades. Furthermore, higher education leaders are challenged
with developing and implementing interventions to address issues associated with
motivation and apathy in an effort to convert the sophomore year into a more
rewarding experience for the student (Pattengale & Schreiner, 2000).

Finally, if sophomores are not successful, then the institution will have difficulty
being successful, thus resulting in higher costs for both the higher education institution
and the student (Pattengale & Schreiner, 2000). Because of the high cost to the
institution through lost tuition, fees and the necessity to recruit replacement students,

necessary to intentionally focus on sophomores and their needs, hopes, and

By expanding their focus to include sophomores, higher education leaders can start

measures to prevent or reduce the number of sophomores who do not persist to their

junior year.

Significance of the study.

Although previous studies have focused on both mentor programs and

academic support programs, few were attentive to discovering the effect these

programs have on the academic success of sophomore students. This study centered

on the academic success of sophomore students who participate in an academic

mentor program, but, more specifically, this study focused on the academic success of

sophomores who participated in an academic mentor program. The results may

impact the allocation of resources designated for student success programs within the

college and university. Conclusions drawn from this study are intended to inform

practitioners on the effects of mentor programs on sophomore student success.

Student mentoring overview.

Because one of the greatest experiences in human development is the

mentoring services within the context of an on-campus learning community are vital if

higher education administrators are to effectively address the threats associated with

sophomore attrition (Chickering, 1969). Mentoring is a specific type of student success

initiative which has become increasingly popular in higher education. Specifically,

mentoring of first-year students by faculty, administrators, and senior students has

on as a popular intervention in support of student persistence (Rodger & Tremblay,

2003). Transformational leaders suggested that mentoring relationships are

important for sophomore students (Chickering, 1969). In higher education, the formal mentoring process is widely believed to have positive benefits and outcomes for both mentor and the student mentee (Rodger & Tremblay, 2003).

Bozeman and Feeney (2007) suggested that unless there is an understanding of the core meaning of mentoring, researchers and administrators are disadvantaged when trying to understand, share, and compare research findings on the topic. Further, practitioners and mentors are ill-prepared to completely comprehend and put mentoring programs and mentoring roles into practice. According to Bernier, Larose, and Soucy (2005), it is the personal characteristics and connections associated with the mentor and the mentee that are important to understanding the effectiveness of mentoring. Further research has intimated that teachers who seem to have the most impact on students are not those who demonstrate high levels of professional traits such as knowledge, experience, or position in the institution, but, rather, those who possess personal characteristics such as friendliness, accessibility, flexibility, and availability (Wilson, Woods, & Gaff, 1974). Chang (1981) cited empathy and respect as traits of successful teachers, and Galbo (1984) added honesty and tolerance as additional traits inherent in successful teachers.

According to Jacobi (1991), mentoring has been described as a relationship connecting a young adult and an older, more experienced adult who helps the younger one to steer clearly in the new world to which the individual is entering. Essentially, mentor helps the mentee avoid mistakes and learn to make sound decisions within his her environment. Mentoring can be further defined as a developmental relationship typically forms between a more experienced individual and a younger, less

person (D'Abate, 2009). Furthermore, mentoring can serve to enhance a variety of functional areas. Such functional areas include the following: socialization, role modeling, sharing knowledge, offering support, providing a path to follow toward success, constructing professional capability and sense of self for the mentored person, fostering the development of individual ability, and providing advice on more general activities such as professional or influential functions like coaching, or providing moral support during times of challenge and growth.

As a process, mentoring has traditionally been seen as a model for apprenticeships in graduate education, but it is now becoming more renowned as a retention approach for undergraduate education (Jacobi, 1991). This approach has been established through both official and unofficial methods. Formal mentoring programs have been shown to provide significant increases in enrollment and retention of minority students. Additionally, formal mentoring programs have shown an increase in overall student satisfaction with their educational experience (James, 1991). Mentoring programs, as characterized by these formal settings, have customarily focused on work-related education instead of areas such as career development and meeting the psychosocial requirements of students. This progression gives students opportunities to form a bond with the institution through programs that ease academic and social integration (Pope, 2002).

At-risk college students are often defined as students who are socially, economically, or academically unprepared or inadequately supported (Vivian, 2005). These students are particularly in need of, and could benefit from, mentoring in The disinclination of these at-risk students to look for faculty mentors, combined with

constraints on faculty time, are some of the factors limiting successful mentoring interactions.

Rationale for mentoring.

Reasons for mentoring include institutional goals such as recruitment and retention of students (Jacobi, 1991) and pedagogical goals such as increasing learning as well as enhancing relationships with faculty and other students (Rodger & Tremblay, 2003). Colleges and universities in the United States are under rising pressure to steadily increase the academic success and graduation rates of students on their campuses (Park, 2008-2009). Increasingly, persistence and graduation rates have become the statistic that higher education institutions use to measure the success of their students. The primary reason that U.S. institutions are most concerned about persistence and graduation rates is related to how the United States Department of Education (USDOE) views student success. The USDOE uses these data as the quantifiable measure of whether or not a college or university's programs are effective. This measure has an effect on an institution's funding and perceived prestige. The increasing need for greater financial support for colleges and universities has fueled many studies to establish strategies that will increase persistence (Ring, 2009). Mentoring has emerged as an important element of programs which support success of at-risk students (D'Abate, 2009). Research has indicated that mentored year students have higher GPAs and lower dropout rates than non-mentored first-year students (Campbell & Campbell, 1997). "The professional literature, popular press, students themselves seem to agree that mentoring is a critical component of effective undergraduate education" (Jacobi, 1991, p. 505). Schwitzer and Thomas (1998) noted

that having a peer mentor can lead to an improvement in adjustment to college, discovering more solutions for student troubles, and higher retention rates for first-year students than for those students who are not mentored. "Growing literature attests to the importance of mentors in undergraduate education" (Jacobi, 1991, p. This goes beyond the possible academic benefits to students in a mentoring The additional benefits could include social, emotional, and cognitive development resulting from frequent exchanges. The mentor has the opportunity to get past first impressions to a more holistic view of the environmental factors influencing a development (Rhodes et al., 2006).

Mentoring has become increasingly prominent in fields such as teacher training, nursing, and business management (D'Abate, 2009). The successful track record of mentoring in these specific fields has contributed to an increased interest in mentoring for college students in general. Mentoring is also recognized as being particularly beneficial to college students who are at risk for failing or withdrawing from a postsecondary institution. D'Abate's (2009) research indicated that these at-risk students are often difficult to contact. Mentoring interactions with students who are in academic jeopardy are less probable to take place with high-ability students than with at-risk students because at-risk students are more prone to search out faculty for guidance. Research pertaining to mentoring in college focuses considerably on defining mentoring, identifying the traits and mechanisms of a mentoring relationship, and discussing the strengths and weaknesses of the mentoring approach.

Purpose of the Study

According to D'Abate (2009), mentoring has emerged as an important element in programs that support the success of sophomores. One of the challenges that colleges and universities face is evaluating the effectiveness of new mentor programs aimed toward increasing academic success and graduation rates. Research from the education sector is spread broadly across secondary education to graduate education in doctoral programs. Jacobi (1991) concluded that mentoring remains unclear and imprecise and lacks a universal definition from a conceptual perspective. He also surmised that the effectiveness of informal and formal mentoring in enhancing undergraduate academic success is not demonstrated, but, rather, it is assumed.

Rodger and Tremblay (2003) commented on the dearth of literature which indicates that mentoring is an effective tool for increasing the academic success of undergraduate students. The majority of the literature focused on the opinions of students and practitioners who indicate that mentoring is perceived to positively affect academic success. The results of a study conducted by the National Resource Center for First-Year Experience & Students in Transition at the University of South Carolina examining the effectiveness of sophomore year initiatives indicated that while faculty and staff mentoring was frequently used at large institutions, few institutions could provide data showing that mentoring influenced the academic success or retention of sophomores (Keup, Gahagan, & Goodwin, 2010).

According to Campbell and Campbell (1997), higher education research on mentoring has been significantly tilted toward one view of evaluation, and there is a to balance the existing literature. While some of the available research assesses the

achievement of specific mentoring outcomes, the majority of published literature

to focus on the examination of the mentoring process and how it is perceived by

participants of mentoring programs. In the competition for recruitment and retention

students, colleges and universities offer myriad programs, support services, and

resources. Mentoring has become one of the fastest growing programs in the support

category (Rodger & Tremblay, 2003). Attempts to evaluate the impact of these

mentoring programs, particularly in the area of student retention, have been

by poor methodological quality, thus making conclusions about their effectiveness

difficult.

Problem statement.

The problem is that there is very little research on effective strategies to

sophomore retention and no research on the effectiveness of mentoring on the

success of sophomore students. The problem stems from the challenges higher

institutions face regarding retention of students and how that relates to the academic

success of students in college. During a time when higher education institutions are

scrutinized and asked to justify the expensive cost of a college degree, poor graduation

and retention rates are a major issue facing colleges and universities in the United States.

According to Clark and Parette (2002), while a significant amount of knowledge exists

educational disciplines regarding the characteristics and needs of students in the first

year, comparatively little information exists regarding approaches for assisting

in the second year of higher education. Campbell and Campbell (1997) intimated that

more research concentrating on the outcomes of mentor programs is needed.

research that evaluates academic mentor programs and their effect on sophomore academic success is needed.

Definitions.

The definition of key terms is important for a full understanding of the information given. These definitions are as follows:

1. Peer Educator Program (PEP) - This is a program designed to mentor undergraduate students in higher education institutions and to help them become more successful academically.

2. Mentor - For the purpose of this study, mentor is defined as an individual involved in a deliberate process concerning interaction between two or more individuals (Shandley, 1989).

3. *Transition to College Inventory (TCI)* - is a non-cognitive measure designed to enhance the predications of academic performance and retention (Pickering, Calliotte, Macera, & Zerwas, 2005).

4. Grade Point Average (GPA) - Grade point average in colleges and universities that use discrete evaluation is calculated by multiplying the quantitative values by the credit value of the correlative course and then dividing the total by the sum of all credits.

5. Academic Performance - For the purpose of this study, academic performance will be defined as how well students perform in their classes at higher education institutions as measured by the GPA.

6. Student Role Commitment – The degree to which an individual is committed to being a student as measured by the *TCI* (Pickering, Calliotte, Macera, & Zerwas, 2005).

7. Academic Achievement - The level of academic performance of a student in an institution of higher education using grade point average.

8. Sophomore Student – For the purpose of this study, students who have earned at least 26 credits but not more than 57credits. (Old Dominion University Catalog, http://catalog.odu.edu/)

9. Professional Mentor - An individual whose primary job is to mentor students at an institution of higher education.

10. Academic Support Programs – Programs, implemented at higher education institutions, which are designed to help students become more successful academically.

11. Higher Education Institution - A postsecondary institution within the United States that provides degrees beyond the high school diploma.

12. Graduation Rate - The percentage of students that start at a particular higher education institution and graduate from that same institution in four and six years

Research Questions.

1. Does participation in an academic mentor program improve academic performance of sophomore students, as measured by cumulative GPA?

2. Does participation in an academic mentor program affect "student role commitment," as defined by the *TCI*, of sophomore students?

3. Does participation in an academic mentor program affect "academic skills confidence," as defined by the *TCI*, of sophomore students?

4. Does participation in an academic mentor program affect persistence of students from sophomore to junior standing?

Methodology and Research Design

This study intended to evaluate the results of a mentor program on the academic performance, motivation, and sense of belonging of sophomore students at a large public university on the east coast who chose to enroll in the program, in comparison to those sophomores who did not. Cumulative grade point averages were used to measure the academic success of the participants and as a comparator to those not in the mentoring program. A survey was sent to the students to evaluate "student role commitment," and "academic/personal skills comfort" of sophomore students that participated in the mentor program and the students that did not participate in the mentor program (see appendix A for the survey). The population consisted of sophomore students at. Institutional Research and Assessment (IRA) randomly selected 800 sophomores from the population to participate in the mentor program. All 800 sophomores were invited to participate in the academic mentor program. The program results were evaluated by designating those students who elected to participate in the academic mentor program as the experimental group and those who did not participate program control group were evaluated by comparing the group's cumulative Grade Point Average (GPA) before and after participation in the mentor program in the mentor program. The "student role commitment" and the "academic skills confidence" of these students were assessed through the use of

corresponding scales within the *Transition to College Inventory (TCI)*. These results for the experimental group were compared to the control group. Statistical analysis was employed to analyze data collected using the Statistical Program for Social Sciences (SPSS). The findings were then reported, analyzed, and interpreted to suggest future implications and research.

Limitations.

There were several delimitations that could have affected the results, reliability, and validity of this study. These delimitations are as follows:

1. The study involved only sophomore students.

2. The study involved only one institution.

3. The study involved selection of the control group sample from the same institution from which the experimental group sample was selected.

4. Maturation of students naturally over time

5. Only surveyed students currently enrolled with no consideration for students that did not persist.

6. Low response rate

Predicted findings.

The researcher predicted that several findings would result from this study. These are as follows:

1. Students who participate in the mentor program will have a greater positive change in their GPAs from the initial fall semester to spring semester and the next fall semester than the group that did not participate in the program.

2. Students who participated in the mentor program will have a greater commitment to being a student, as defined by the *TCI*, than the group that did not participate in the program.

3. Students who participated in the mentor program will have greater confidence in their academic skills, as defined by the *TCI*, than the group that did not participate in the mentor program.

4. It is expected that there will be a higher persistence rate of sophomore students from fall semester to fall semester for the experimental group, those participating in the mentor program, as compared with the control group, who did not.

Conclusion

This study intended to evaluate the results of an academic mentor program on academic achievement of sophomore students at a large public higher education institution on the east coast during the fall semester of 2013. This study compared the "student role commitment" of students who participated in the academic mentor with the "student role commitment" of students who did not participate in an mentor program. This comparison was conducted to determine whether there was a correlation between having a mentor and the student's level of "student role commitment" as defined by the *TCI*. Finally, this study compared the "student role commitment" of students who participated in the academic mentor program with the "student role commitment" of students who did not participate in an academic mentor program. This comparison was conducted to determine whether there was a

between having a mentor and the student's level of "student role commitment" as

by the *TCI*.

The search for a solution to the retention and achievement gap that exists

between the sophomore and junior years is important. Research that identifies

effective academic support programs and interventions to help sophomores be more

academically successful can also significantly improve the retention and the

graduation rate of the sophomore student. The effectiveness of the mentor program

can provide insight into a possible avenue for increasing the academic achievement

and persistence to degree of sophomores.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction.

A limited amount of literature focusing on college sophomores was available. A significant amount of this literature focused on college sophomore achievement, persistence, and/or the lack of achievement or persistence. College sophomores across the United States are often treated differently than other college students (Broughton & Neyer, 2001). A plethora of programs and support initiatives exist for college freshmen followed by a steep decline in programs and support initiatives for sophomores. This gap in support services can make the life of a college sophomore much more difficult than that of the average college freshman, junior, or senior. This decline can significantly affect academic achievement, retention, and persistence to degree.

Additionally, Hyatt (2003) suggested that, in response to the growing awareness of student retention issues, many individual institutions have hastened to implement academic and student service programs which are targeted at improving the graduation rates of their students. These programs have met with mixed and/or limited success. The suggested reason behind the limited success of these programs is attributed to an institution's implementation of these programs prior to gaining an understanding of the student population which they intend to help.

Literature focusing on academic success programs for sophomores, particularly academic mentor programs, was scarce. However, a significant amount of literature was

available on college sophomores and their differences from the general student population-- particularly in terms of academic achievement, barriers faced, and additional demands on their time and abilities (Broughton & Neyer, 2001). Literature describing mentors and mentor programs, in general, was available as well as literature describing how mentoring affects students enrolled in higher education institutions. In this study, this literature was combined to provide a basis for an overall understanding of mentor programs in higher education.

Many variables affect persistence in college. According to Hyatt (2003), understanding the multitude of variables affecting college persistence and academic achievement in a specific student population at a specific institution is the first step in developing retention programs which will be effective in helping the intended population. In the literature, these variables were typically categorized as either cognitive (intellectual) or non-cognitive (attitudinal or motivational).

Academic support has become a popular and much discussed topic in higher education today. The need to support students, the role all support programs play in retention, and, ultimately, the academic quality and financial health of an institution cannot be ignored. Because sophomores represent a large percentage of the college student population, and because of the unique social, physical, and structural demands placed on sophomores today, it behooves higher education administrators to invest time and resources to support programs and initiatives that will increase the overall academic success and retention of their student population (Gohn, Swartz, & Donnelly, 2001).

Mentoring.

In higher education today, young adults enter college and almost immediately confront myriad academic, psychological, and social challenges. Today's college students face pressures to assume leadership roles on campus; become active in student organizations; and achieve and explore social groups while also coping with being away from home, family, and loved ones for probably the first time in their lives. While many students are able to successfully make this transition, some are not as successful and succumb to depression, addictions, and/or alcohol and substance abuse (Cramer & Prentice-Dunn, 2007).

Mentors are a critical option for many college freshmen who are overwhelmed by the adjustment to college life, large classrooms, life choices, instability, and new living situations (Cramer & Prentice-Dunn, 2007). Reasons for mentoring include institutional goals such as increased and/or improved recruitment and retention of students. Goals, such as increasing learning and enhancing relationships with faculty and other students, are considered important for student success. D'Abate (2009) commented that higher education administrators who are responsible for mentoring programs should clarify the meaning of the term "mentoring." Rhodes, Spencer, Keller, Liang, and Noam (2006) suggested that mentoring influences students in three ways: The first way is by increasing the social relationships and emotional well-being of the student; the second is by enhancing student thinking skills through coaching and discussion; and the third way is by encouraging constructive identity growth by serving as role models and student advocates. Over time, these processes act synergistically with one another.

Many observations have been made with respect to research on the effects of mentoring college students. The majority of the literature on mentoring and undergraduate academic success indicated that mentoring is a critical component of effective undergraduate education and looks at recent interest in mentoring, the need for holistic support services, and a link between mentoring and positive student outcomes (Rodger & Tremblay, 2003). Tinto (1993) suggested that although students' academic and socio-emotional predispositions may influence their adjustment to college, the impact of these factors depends on the quality of the students' connections with other members of the college or university community. Tinto further suggested that faculty members, who represent the institution's rules and values, are particularly influential in new students' adjustment to the institution. Experimental research supported these claims by showing that informal contacts, those that are carried on outside the classroom, between college students and faculty have a positive impact on students' academic performance, satisfaction with college life, retention, and educational and career goals (Pascarella & Terenzini, 2005).

According to Rhodes et al. (2006), mentoring relationships may add to the cognitive maturity of students through a number of mechanisms including introduction to innovative chances for learning, exposure to academic challenge and direction, and support of educational achievement. The mentoring relationship may add directly or indirectly to success in school. Mentors may encourage affirmative attitudes toward academics, promote educational endeavors, and assist with school projectStudentmentoring can often be interpreted or viewed as a form of social where faculty and other higher education professionals with whom college students

associate can provide much needed insight (Davis, 2001). These faculty and higher

education professionals can also provide advice, advocacy, and power to students

mentoring relationships or mentoring type programs. For example, when examining

experiences of students who persist in science majors, mentoring relationships

consistently appear to be a critical factor in the students' academic success and

persistence (Baker & Leary, 1995).

It is likely that these mentors yield a certain social capital which students can

use to develop a foothold in the higher education community, particularly in their

major department. Without mentoring relationships with these higher education

professionals, students may perceive their access to the university community as

blocked. Students may perceive faculty and other professionals as a form of

gatekeeper rather than mentor (Packard, 2005).

Rhodes et al. (2006) commented on school sponsored mentoring programs

indicating that there has been substantial growth in these types of programs. It is

plausible that a mentor in a close, trusting relationship with a student could

and promote a student's current academic interests or support curiosity and

education in new areas. Studies focusing on the role of social support in cognitive

maturity have suggested that there is a social nature to learning and that mentoring

impacts learning (Connell & Wellborn, 1991; Rhodes et al., 2006). These views of

teacher–student relationships have been linked with academic success among youth

have been correlated with positive outcomes in school engagement, school value,

motivation, academic competence and achievement, and behavioral adjustment

& Wellborn, 1991). In particular, these authors have recognized enhanced educational adjustment for youth who have close relationships with natural or assigned mentors.

Freshmen who are assigned to a type of university mentor demonstrate greater gains in goal setting, decision-making, and problem solving when compared to their non-mentored peers (Cosgrove, 1986). Mentorship programs in higher education have been associated with effective transitioning to college and improved college self-efficacy. Students in established mentoring programs demonstrated increased student satisfaction with the collegiate environment as well as improved skills at research (Santos & Reigadas, 2002). Successful mentorship programs are often based on a philosophy of caring for the whole person (Cramer & Prentice-Dunn, 2007). Mentoring from this approach can facilitate remarkable outcomes.

According to Budge (2006), mentoring in the higher education setting is steadily growing to become a fundamental characteristic of student life. Normally, conventional mentoring in post- secondary education has incorporated faculty and staff members who have provided, informal mentoring to graduate students in the university setting. Nonetheless, as traditional concepts of mentoring relationships are shifting, the definitions have also altered. Jacobi (1991) observed that within higher education, undergraduates are more commonly used as peer mentors, calling into question the importance conventionally placed on a wide age difference between mentors and mentees. The connection developed by peer mentors seems to be greater and has a more lasting effect than those of an older mentor. Peer mentors have a greater ability to understand mentees' point of reference and view point and to help them by using a perspective they can easily understand.

One of the most important reasons mentoring has been implemented at the college and university level is to boost retention rates. Quinn, Muldoon, and Hollingworth (2002), after closely watching retention and graduation rates and additional indicators of the quality of universities, commented that these problems were commonly connected to inadequately prepared students and reduced government funding. For the most part, mentoring programs were established to concentrate on the extensive assortment of problems that undergraduate students experience. Institutions with mentoring programs that provide support and encouragement to students with academic difficulties and adjustment problems during their first year have experienced increases in their retention and graduation rates (Masten & Bushig 2003) ams positively affected both the mentees and mentors who have participated in the mentoring experience (Vaidya, 1994). For mentors, developing or increasing interpersonal and communication skills were found to be the two most important benefits gained from participation in peer mentoring programs. Both mentors and mentees indicated that they had grown other traits such as patience and compassion. Maturation, time management, and assuming greater responsibility have also been specified as positive aspects gained by both the mentor and the mentee through the mentoring process (McLean, 2004). An academic or peer mentor may also enhance a college student's sense of worth and academic self-efficacy as well as overall contentment with their academic program (Ferrari, 2004).

While the majority of benefits which are generally studied fall under a psychosocial category, there are also numerous academic benefits. Mentoring can positively influence the career choices of students. Additionally, mentoring can affect

students' scholastic motivation or their perseverance in following their educational

Mentoring can also influence student achievement in higher education by encouraging

students to put greater effort into their studies (Brown, Davis, & McClendon, 1999;

Ferrari, 2004; Packard, 2003).

Efficacy of mentoring programs.

Attempts to evaluate the impact of mentoring programs, particularly in the

area of student retention, have been characterized by poor methodological quality,

making conclusions about their effectiveness difficult. Jacobi (1991) concluded that

the concept of mentoring remains ambiguous and imprecise. The effectiveness of

informal or formal mentoring in promoting undergraduate academic achievement is

assumed rather than demonstrated.

Thile and Matt (1995) studied a small group of mentored students in an

undergraduate mentoring program designed to serve minorities. The mentored

students performed better than the university-wide average in both GPA and

retention. However, neither of these studies used a randomized control group to

assess mentoring effects. Studies focusing on the primary program outcomes of

academic performance and retention are rare. Based on investigation of the

literature, only one study could be found that examined outcomes in a control-group

design.Campbell and Campbell (1997) evaluated academic gain through grade point

average and retention rate. They discovered that at the end of one year, mentored

undergraduate students performed better academically than non-mentored

undergraduates with the same entering GPA, gender, ethnicity, and class level. The

sample size used was appropriate and randomized selection was employed in choosing

the groups.

While goals-based outcome evaluation studies are rare in mentoring literature, there are many studies that contend with attitudes, perceptions, and preferences regarding the mentoring experience. Ferrari (2004) observed that college students acknowledging the assistance of a mentor also reported a stronger sense of their college's mission, a greater sense of altruism, and a greater commitment to lifelong learning. However, none of this research can be used to infer the efficacy of mentoring to produce desired outcomes.

Research also described how mentors and their protégés have different perspectives and concerns regarding the mentoring experience (Campbell & Campbell, 2000). Rose (2005) analyzed mentor perceptions and preferences using the Ideal Mentor Scale, a measure designed to help graduate students consider the qualities they value most in a potential mentor. Rose found that qualities of the personal relationship were related to student satisfaction with the mentor and postulates that this finding may extend to the mentoring of undergraduates as well.

History of mentoring.

An extensive review of literature associated with mentoring yielded sparse information regarding the history of mentoring. The history of mentoring can be traced to Homer, the ancient Greek poet, who first coined the word "mentor" in his epic poem, "The Odyssey." The great warrior, Odysseus, left for a year and chose a man named "mentor" to be the guardian/tutor for his son (The Mentoring Institute, 2001).
Definitions of mentoring.

The assets and advantages of mentoring have withstood the test of time and been found to be related to the undergraduate experience (Scott & Homant, 2008).

a higher education perspective, Shandley (1989) defined mentoring as an intentional process involving interaction between two or more persons. Furthermore, he that mentoring is a nurturing process which fosters the growth and development of student. Conversely, Moore and Amey (1998) described mentoring as a form of professional socialization allowing a more experienced individual to act as a teacher, a role model, and a guide for the less experienced college student. Fagenson (1989) defined a student mentor as an individual in a position of power who provides advice. However, Phillips-Jones (1982) indicated that mentors basically influence people and assist them in achieving their personal and professional goals. Lastly, Zey (1984) described a student mentor as an individual who oversees the development and career the student.

Several differing ideas exist regarding the depth, breadth, and span of mentoring. The concept of mentoring, as described by Johnson- Bailey and Cervero (2004), is a complex notion that they liken to a delicate dance. Mentoring does not have to be limited to a dyadic relationship. According to Salinitri (2005), mentoring was about creating an enduring and meaningful relationship with another person, with the focus on the quality of that relationship including such factors as mutual respect, willingness to learn from each other, or the use of interpersonal skills. This relationship builds a powerful learning environment from which both parties benefit.

In previous research, the term mentor has been defined as a person with experience who guides, advises, and supports a less-experienced person with the intention of fostering the latter's career growth (Campbell & Campbell, 2007). upon prior definitions in the literature, it can be determined that the use of the term

"mentoring" refers to any situation in which a more experienced member of an

organization maintains a relationship with a less experienced member of an

The more experienced member provides information, support, and guidance for the

purpose of enhancing the less experienced member's chances of organizational

Mentoring environments.

Although mentoring is an old concept, it can still be found in many different

forms and areas of contemporary higher education. Research on mentoring has not

been limited to the academic setting. Recent research generally examined mentoring

in two types of organizational settings: business and education (Young & Wright,

2001). Many of the concepts and benefits discussed in business literature can also be

found in higher education literature. For the purpose of this study, research covered

some of the literature found in business research but primarily focused on education

research.

Mentoring in business.

In general, research on mentoring has not been restricted to the academic

setting and also included mentoring in business. In business environments, mentoring

has been seen as a training strategy for developing managerial potential within an

organization (Shultz, Colton, & Colton, 2001). Mentoring is beneficial for the

organization as it has been shown to increase retention rates. The mentor benefits

through the building of a stronger powerbase as well as through support from new

hires. Finally, the protégé benefits from more rapid career advancement through

interactions with the mentor (Young & Wright, 2001).

The specific helping aspect which mentors provide to protégés varies widely.

According to Kartje (1996), mentoring could include any or all of three broad

components. The first is emotional and psychological support. The second is direct assistance with career and professional development to prepare a student to work in field effectively and professionally. The third component is role modeling to the norms of the field and teach the protégé to interact with other professionals.

Kartje (1996) suggested that mentoring relationships are reciprocal relationships. The mentor, as well as the protégé, benefits from the relationship in ways that do not include anything monetary. The mentors simply take responsibility for the students' academic success and also learn life lessons from the students.

Further, mentoring relationships are personal connections. Despite some published research in which individuals named books or distant role models as mentors, most researchers agree that mentorship requires direct interaction between the mentor and the protégé. While these relationships may not necessarily be long term or close, they involve an exchange of information between two people beyond that available from public records. Relative to their protégés, mentors show greater experience, influence, and achievement within a particular organization or environment. This allows them to be of assistance to the person being mentored (Shultz, Colman & Holtom, 2000) of research in the business setting showed that relationships afford an important aspect of career development and growth for both mentors and mentees (Allen, 2003; Bova, 2000). People with mentors reported more promotions, higher incomes, more opportunities, and higher job satisfaction; they use of greater influence than individuals who are not mentored (Baugh, Lankau, & Scandura, 1996; Bova, 2000; Eby & Lockwood, 2005). Mentoring is important as a career preparation and development to help socialize employees into the

reduce work stress, and increase mentors' and mentees' self-efficacy and sense of worth (Baugh et al., 1996; Fagensen-Eland et al., 1997; Eby & Lockwood, 2005).

Mentors also describe benefits derived from the process. They detail improved support networks, fulfillment from helping others mature and thrive, and access to information that enhances job performance (Eby & McManus, 2004). The business organization also benefits from lower employee turnover, higher commitment from mentees and mentors, and the establishment of greater leadership talent for their organizations (Baugh et al., 1996; Eby & McManus, 2004; Scandura & Williams, 2001).

Mentoring in education.

In the competition for recruitment and retention of students, colleges and universities offer myriad programs, support services, and resources (Rodger & Tremblay, 2003). According to Brier (1984), bridging the academic achievement gap has been a constant struggle throughout the history of American higher education, and the debate surrounding this gap has become an American tradition in higher education. Since the beginning of American post-secondary education, a variety of approaches in academic achievement have been tried to meet this gap in academically preparing college students.

Academic access, as discussed in the literature, describes the complete assortment of activities and academic support services that a higher education institution provides to enhance the academic success of its students. American colleges and universities have been providing such services since the beginning of higher education in the United States. While the first materialization was through tutor programs, the most current approaches have been through developmental education, learning assistance centers, and mentoring programs (Rodger & Tremblay, 2003).

Programs which are characterized by proactive interventions create powerful and effective academic achievement and retention outcomes (Astin, 1993). These proactive programs do not leave academic success to chance. These programs require students to participate in program activities which are structured to help them avoid the social and academic behaviors and pitfalls that lead to poor academic performance or withdrawal. Reactive programs, which are actually student initiated, have been successful for some students who were not classified as at risk and were generally found to be unsuccessful for students considered to be high risk or for minority students (Astin, 1993).

A type of intervention that is becoming increasingly popular in higher education is the mentoring of students by faculty and senior students. This formal mentoring process is widely understood to be related to positive results for both the mentor and mentee (Rodger & Tremblay, 2003). This proactive process of academic support can also be labor time intensive. Successful mentoring programs provide appropriate role models that encourage, help, and support students through the educational process; in addition, successful mentoring helps students deal with the intricacies of the particular institution which the student is attending (Tinto, 1993).

Numerous mentoring programs exist in higher education. Faculty and peer mentoring, in particular, are the two forms of mentoring most often used on college campuses (Harmon, 2006). These types of mentoring programs are typically used in conjunction with a first-year seminar or other related student success programs. These initiatives are used as a way to ease students' transition from high school to college by providing role modeling, supporting the students' personal development, and helping students to succeed academically.

According to Packard, Walsh, and Seidenberg (2004), the purpose of mentoring can be drawn from informal or formal sources. Informal sources may include advising and independent research with a faculty member, and formal sources may include structured mentoring programs designed with retention in mind. Normally, two principle categories are used to illustrate the functions of mentoring: career-related and psychosocial roles. In the literature, sponsorship, challenge, and coaching were important career mentoring roles; while counseling, role modeling, and friendship were key psychosocial mentoring roles (Bernier, Larose, & Soucy, 2005). To illustrate the meaning of these roles, a college student would benefit from career mentoring in the form of letters of recommendation for important internship experiences (sponsorship), the assignment of increasingly difficult tasks in the research lab or classroom (challenge), and professional development guidance through the visualization of various career options (coaching).

Furthermore, students can benefit from psychosocial mentoring in the form of counseling, someone with which to identify, and encouragement with coursework despite obstacles. Empirical research in higher education has not determined whether career mentoring or psychosocial mentoring is more effective as it is applied to retention and persistence to graduation. Research indicated that each type of mentoring wass important, just not the degree to which each mentoring style contributed to student benefits (Bernier, Larose, & Soucy, 2005).

The degree to which students experience career-related or psychosocial of mentoring during the time when they are expected to make important decisions continuing with their majors or switching to other majors directly contributes to

to persist or leave the institution (Bernier, Larose, & Soucy, 2005). The sophomore has been identified as the most important period when many universities request that students make a commitment to their major. This is a time when sophomores must a decision that will strongly impact their career, post-graduation plans, and/or future developmental path (Packard, 2005).

This decision-making period coincides with a natural developmental period when young adults strive to develop a more concrete sense of their career identities. Studies have examined whether college students who persist in their majors or at their institutions had different mentoring experiences during their sophomore years. These studies have also looked at whether their mentoring was career-related or psychosocial (Farmer, Wardrop, Anderson, & Risinger, 1995).

Mentoring has become a steadily growing resource for improving college student academic achievement as well as retention. Studies have shown that mentoring programs improve study skills, motivation, academic adjustment, and personal adjustment (Jacobi, 1991). All of these areas positively impact retention rates as well as improve the academic success of students.

Several factors explain this positive impact on student success and retention. Some of the more influential factors are the feedback provided to students on their coping strategies, and the reinforcement of their personal values during a time when students may be severely threatened. Mentoring also communicates to students a sense that faculty and administrators care about their success in college and in life (Shultz, Colton, & Colton 2001; Bernier et al., 2005).

For the purpose of this study research was limited to the higher education institution setting. Research on mentoring in the academic setting varied widely. Additionally, research on mentoring in educational settings ranged from peer mentoring in secondary education to college studies of doctoral candidates and their dissertation advisors (Shultz, Colton, & Colton, 2001).

Mentoring is distinguishable from other retention or academic support activities because of its emphasis on learning, in general, and mutual learning, in particular. Mentoring relationships are helping relationships which usually focus on academic achievement. The primary area of a mentoring relationship is the assistance and support provided to the protégé by the mentor (Kartje, 1996).

In modern higher education, there are two types of mentoring programs: formal and informal mentoring. O'Brien (1989) indicated that formal mentoring programs are designed to increase student retention thereby increasing enrollment as well as improving students' satisfaction with their academic experience. Informal mentoring is considered to be a spontaneous relationship which has been established by two or more individuals and is for the purpose of benefitting those parties involved. The extent of informal mentoring in higher education is not currently known; however, evidence indicated that informal mentoring positively influenced the development of more formal mentoring efforts. Many informal mentoring partnerships are thought to foster academic success; therefore, more formal mentoring models in higher education have been designed and implemented (Jacobi, 1991). There are several types of mentoring found in higher education. The three that is focused on in this literature review are faculty mentoring, peer mentoring, and supervisory mentoring.

Faculty mentoring.

One projected outcome of a flourishing mentoring relationship is enhanced academic and postgraduate success. In some colleges, even the most basic success indicator, retention as an enrolled student, is a concern. Pitkethly and Prosser (2001) found that one-third of all students who enrolled at Australian universities failed to graduate, and half of those who dropped out did so in the first year. These studies indicated that information and advice, such as that provided by a mentor, might be a productive remedial factor for reducing student attrition at the college level.

In an attempt to prevent problems, which are characteristically related to student transition from high school to college, several colleges and universities have created academic mentoring programs. These programs usually pair a professor with a freshman and consist of scheduled one-on-one meetings. Faculty mentoring is intended to supply students with skills and individualized support designed for dealing with the stresses of the transition. Rhodes, Grossman, and Resch (2000) indicated that this kind of mentoring program enhances study skills, motivation, academic adjustment, and personal adjustment.

Undergraduate student–faculty mentor programs have been implemented in various forms in colleges and universities across the United States. These programs have been developed often in conjunction with enhanced academic support in other areas such as tutoring, counseling, and financial aid. The purpose of developing these support programs in conjunction with each other is to create a campus climate that contributes to the retention and academic success of students, particularly those new to campus and with the highest risk of dropping out (Pascarella & Terenzini, 2005).

Typically, an administrative office or committee solicits volunteer mentor and mentee applicants. The administration matches students with faculty or staff based on criteria such as academic specialty and ethnicity. The mentor program sometimes provides resources, training, and money to support mentoring activities. This requires an involved and concerned administration. Faculty mentoring is similar to role modeling in that faculty mentors model how to successfully adjust to college life and manage its challenges (Harmon, 2006; Douglas & McCauley, 1999; Higgins, 2000; Higgins & Thomas, 2001; Murrell, Crosby, & Ely, 1999). Individuals need motivation to learn and develop, exposing them to educational opportunities, and giving them needed support. Mentoring entails guiding, academic goal setting and goal tracking, monitoring, problem solving, feedback, information sharing, teaching, aiding, advising, and encouraging. Moreover, mentoring sometimes includes modeling and introducing students to people and resources (D'Abate, 2009).

In general, mentoring is recognized by faculty as contributing to a positive college experience (Little, 1990). Professors are pulled in myriad directions by their institution, and even the most well-intentioned faculty find it difficult, if not unworkable, to spend a considerable amount of time mentoring more than a few students at any given time. Mapping out a student's plan of study, which should offer professors a chance to form relationships with students on an individual level, is frequently relegated to a half hour of impersonalized effort in which faculty become prescriptive advisors showing students nothing more than electives, curricular requirements, and/or required courses for their major (Vivian, 2005).

Peer Mentoring.

According to Terrion and Leonard (2007), peer mentoring in higher education is considered to be a valuable intervention tool for increasing the academic achievement and retention of at-risk students. Many colleges and universities have created some type of mentoring initiative as part of their student success programming. Although there has been extensive research supporting the employment of peer mentors so as to increase academic performance and reduce student attrition, Terrion and Leonard comment that few of these studies connect peer mentoring with the kind of peer who is most appropriate to carry out the functions of a true peer mentor. Zhang and Hamilton (2009) remark on peer education environments and networks and indicate that colleges and universities can develop an environment to sustain peer networks so as to rouse insightful thinking and develop students' academic abilities.

According to Cramer and Prentice-Dunn (2007), a discussion of the role of the mentor is incomplete without detailing the necessary qualities of a successful mentor. The successful mentor is available for the student, knowledgeable, and well-versed in diversity issues. The effective mentor is empathetic, personable, encouraging, and supportive. Lastly, the successful mentor is passionate about working with the Mentors who care for the whole person help to provide students with a sense of connection, which is crucial for persistence (Cramer & Prentice-Dunn, 2007). The mentor-mentee relationship is aimed at helping the student to develop his or her and to better understand the relationship of a situation or given task (Scott & Homant, 2007). Peer mentoring programs have been extensively implemented by universities colleges as essential parts of their strategies to improve the experience of first year

students to support them in making the transition from high school to the college and university setting. These programs involve upper-class students who mentor first-year and second-year students. Using upper-class students as mentors instead of faculty members takes advantage of students' capacity to share their own recent experiences students. This also eliminates the problems involved in the status differences that may exist between faculty and students (Hall & Jaugietis, 2011). The few evaluations of mentoring programs which have been reported have focused on either the connection between mentoring and academic success (Rodger & Tremblay, 2003) or on the impact of mentoring on adjustment to university life (Hall & Jaugietis, 2011). Rodger and Tremblay (2003) found that students who used the peer mentoring program achieved higher grade point averages than those who did not use mentoring programs; the worked especially well for students scoring high in anxiety.

The notion of mentoring has become progressively more popular over the past two decades. Mentoring has been pitched as essential in order for students and employees to thrive in their environment. According to Hall and Jaugietis (2011), the insufficiency of research pertaining specifically to peer mentoring programs was astonishing. While there were many articles on the topic of mentoring in the educational setting, authors need to adhere to more rigorous research standards and more consistency of definition. In addition, Hall and Jaugietis (2011) also stated that besides higher quality research, the basic flaws inherent within peer mentoring programs need to be addressed before these programs can achieve their full potential for helping make change. Lewin, Bingam, and Yanchus (2005) discussed the various approaches to the study of mentoring and have linked mentoring to positive outcomes

a variety of organizational environments including academic contexts. Data indicated that students who participate in mentoring programs gain the same benefits as professionals who have formal mentors. The study of peer mentoring relationships is essential because of the value it imparts to a protégé's personal and professional as well as the potential benefits to the mentor through peer mentoring relationships.

Thomas et al. (2005) also spoke to peer mentoring as an important approach for diversity initiatives. In particular, these authors addressed the diversification of the network of minority students who might otherwise only seek mentoring or networking from other minorities. Higher education institutions should persist in expanding, employing, and evaluating formal mentoring programs, but, in doing so, they should also expand their mentoring programs to encompass peer mentoring.

Cramer & Prentice-Dunn, (2007) contended that literature on the efficacy of peer mentoring programs for undergraduates was limited in scale. Further, these authors comment that the value appears to be assumed instead of effectively evaluated, assessed, or verified. Russel and Skinkle (1990) disagreed and found that freshmen who participated in peer mentoring programs were more likely to be involved in extracurricular activities, have a greater sense of belonging to the university, and were more successful in their academic studies

Supervisory mentors.

While not all students need to be involved in a mentorship program, mentors mentorship programs often fill a critical need for college freshmen and at-risk Mentor programs can effectively provide support for a wide range of student needs. Because of the value mentorship programs play in students' adjustment to college, it

becomes imperative that guidelines are established to support the success of the (Cramer & Prentice-Dunn, 2007).

While mentoring and administering mentorship programs are not easy tasks, the role of the mentor is an important factor in the healthy development of college students. Effective mentors facilitate the growth and development of the student as an individual which eases the transition to college. Higher education should galvanize efforts to design, develop, and implement mentorship programs. Within these programs, they must instill guidelines and expectations for the mentors in support of the student's effective transition to college (Cramer & Prentice-Dunn, 2007).

Research on retention.

According to D'Abate (2009), research involving student retention in higher education has become increasingly important in the last two decades due to increased competition for students among colleges and universities. In many colleges and universities, the result of this competition for students is the admission of students with varying skill levels (Peltier, Laden, & Matranga, 1999). Many universities view retention as a component of the educational progression, with transition programs to deal with academic, personal, and social experiences (Hicks, 2005). Astin (1974) formulated his theory of involvement, postulating that students associate learning and retention with their involvement within an institution. Astin's argument was that true involvement needs the outlay of energy in academic associations and activities connected to the campus.

The most commonly cited theory of student persistence, the theory of student departure, was developed by Tinto (1987). In a longitudinal model of institutional

departure, Tinto credited student's choice to continue attending an institution to characteristics. The student's goals and commitments, academic and social experiences, and academic and social integration are the traits he postulated to most strongly affect persistence. Tinto used this model to distinguish individual factors from institutional factors and found that the structure of an institution of higher education influenced the persistence decisions of students.

The frequency of student attrition is a progressively more complicated challenge facing contemporary U.S. higher education (Kelly, Kendrick, Newgent, & Lucas, 2007). Roughly 25 percent of students who enroll in four-year colleges or universities depart before graduating (American College Testing, 2001). During the last three decades, researchers have focused on variables that manipulate student persistence and degree attainment (Yale, 2010). According to Titus (2004), the demand for accountability of colleges and universities for retention and graduation rates is increasing despite the need to understand more about what contributes to college student persistence. Research and problems associated with student persistence and retention continue to be common in higher education (Yale, 2010).

According to Yale (2010), a great number of students at U.S. colleges and universities do not graduate in five years, regardless of particular student or institutional characteristics. Administrators in higher education are pressured to create techniques to improve student success and persistence-to-degree rates. Higher education administrators are asked to look at new ways to increase retention rates and student persistence to degree. Retention and persistence has become the standard to which colleges and universities in the United States are held.

Academic Success of Sophomores

Earlier research and most current retention initiatives have principally been designed to aid freshmen and to enhance the first-year experience (Gardner, Pattengale, & Schreiner, 2000; Pattengale & Schreiner, 2000); however, sophomores are a uniquely vulnerable group with increasing levels of dissatisfaction and attrition (Boivin, Fountain, & Baylis, 2000). For the past five decades, higher education professionals have recognized the 'sophomore slump,' but, there was a dearth of research on what precisely it was and how to successfully conquer it (Isakovski, Kruml, Bibb, & Benson, 2011). After the first new and exciting year, sophomores frequently have trouble finding what they are passionate about and setting goals (Gardner, Pattengale, & Schreiner, 2000; Lemons & Richmond, 1987). This leaves them with a feeling of disconnect and disorganization (Isakovski, Kruml, Bibb, & Benson, 2011). Students recognize there are differences between what they expected and the reality of college. This realization leads to feelings of insecurity about their future (Evenbeck, Boston, DuVivier, & Hallberg, 2000). Therefore, sophomores can become disconnected thus increasing the possibility that they will drop out of college (Schaller, 2005). This is also a time in which sophomores, lacking the support of a deliberate method to work through uncertainty, are left to select majors or careers about which they know little (Isakovski, Kruml, Bibb, & Benson, 2011).

The number of researchers taking a particular interest in the distinctive and over-looked needs of sophomores in college, particularly as they affect retention, and academic success, and increase student satisfaction has grown (Pattengale & 2000; Schaller, 2005; Graunke & Woosley, 2005). It is becoming increasingly apparent

that the needs of sophomores diverge considerably from other class levels and wrestle with issues of academic, social, financial, and motivational challenges specific to sophomores (Boivin, Fountain, & Baylis, 2000). According to Gardner, Pattengale, & Schreiner (2000), sophomores were unique in their learning styles, engagement in coursework, classroom behaviors, faculty relationships, peer interactions, and participation in social activities.

Sophomore success.

The sophomore year is a particularly challenging time for students who with increased expectations, intensified curriculum, and higher academic standards often lead to disengagement from academic life (Pattengale & Schreiner, 2000). Although the disconnect sophomores experience is well documented (Freedman, academicians face new challenges when dealing with millennial students, those born between 1980 and 2000, as they try to facilitate connections between students' strengths, and goals to chosen majors and potential career opportunities. Millennial students typically come to college having been shepherded and given much individual attention. They feel close to their parents (Sujansky, 2009) who protected them & Oh, 2007), guided them, and made decisions for them (Sujansky, 2009). Consequently, they need a roadmap to success and expect constant nurturing and feedback (Meister & Willyerd, 2010; Sujansky, 2009). Moreover, colleges have put tremendous focus on freshman programs while putting relative little effort into sophomore programs. Coupled with the unique characteristics of millennials, the sophomore slump becomes more pronounced as students move from being the institution's focus during the first year to feeling almost neglected in the second. In

addition, this generation of students has not been taught or does not have experience self-reflection (Prensky, 2001); rather, millennials want instant answers (Skiba & 2006).

Sophomore retention.

Many current and past research and retention initiatives have focused principally on the freshman or first-year experience (Graunke & Woosley, 2005). This myopic focus exists despite the fact that sophomores are a distinctively susceptible population with growing dissatisfaction and attrition rates. The literature showed significant support to corroborate the distinctive needs of sophomores. Additionally, the literature provided a basis for creating programs and services specific to sophomores to aid them in the navigation of the difficult areas that are essential to retention. Schaller (2005) described the lack of support for sophomores as unfortunate and confirmed that the sophomore year is usually the time when institutions offer the fewest services and initiatives focusing on the sophomore student population. At most institutions, a great deal of effort and extensive resources are allocated to the freshman class in an attempt to connect with and retain students. In addition, resources are also typically given to juniors and seniors to provide career advisement and planning, leaving sophomores with considerably less attention and fewer services and programs specific to their needs.

Schaller (2005) commented on the growing number of researchers who have taken a particular interest in studying the distinctive needs of college sophomores and their retention, academic success, and student satisfaction. There is an increasing realization that the requirements of sophomores diverge considerably from other class

levels. Sophomores have a unique struggle with issues pertaining to academic, social,

financial, and motivational challenges particular to the second year student. Nealy

maintained that retention initiatives throughout the freshman year might be a waste

time if not continued for the duration of the second year. Moreover, Nealy

that researchers have begun to recognize particular strategies and methods designed

retain students and to maximize academic success in the second year.

The sophomore year is an especially demanding time for students.

struggle with greater expectations, an increasingly difficult curriculum, and elevated

academic standards which often lead to a student's disengagement from academic life

(Pattengale & Schreiner, 2000). Higher education literature generally referred to this

period as the "sophomore slump." Lemons and Richmond (1987) viewed the

slump from a developmental perspective and classified four key areas of college

development that appear to be critical to understanding and achieving success during

sophomore year. These four key areas included developing competency, increasing

independence, defining identity, and creating a purpose. The level of competence that

sophomores are challenged with achieving increases significantly over the competence

level expected of them in their freshman year. According to Sanchez-Leguelinel (2008),

there was an expectation that sophomores will increasingly become more

and need less support during a time of significant transition as well as academic and

social challenges. Sophomores struggle with ideas of self-esteem and self-concept as

they experiment with different roles during their search for identity development.

need to develop purpose for direction and commitment. The developmental issues

sophomores face are a sign of crisis for many and add to the complicated experiences they face during the second year.

Many other factors can be identified as contributors to the sophomore slump, commencing with the move from freshman year to sophomore year. Numerous higher education institutions expend considerable funds and hard work on the freshman year experience through the employment of academic support programs, enhanced counseling interventions, and peer mentor programs, social growth initiatives, and enhancing faculty-student interaction. Regrettably, during the second year, nearly all of these support systems are reduced or eliminated. The reduction in programming and services has the effect of leaving sophomores feeling overlooked and neglected by the school. Furthermore, the sophomore year is when students start to feel disillusionment as they become conscious of the reality of college life and the pros and cons of a college education (Sanchez-Leguelinel, 2008).

History of the "sophomore slump".

According to Gump (2007), a "sophomore slump" frequently occurs when second-year students struggle again to adjust to college life without transition programs which are designed to reduce attrition rates and are planned for and frequently offered solely to first-year students. Two of the most frequent results of the sophomore slump are increased absenteeism from class and declining academic performance phrase, *sophomore slump,* first appeared in some of the earliest literature the 1950s, but awareness of the idea was anticipated in the literature several decades before (Gump, 2007). Angell (1930) commented that "student life in our universities is coming to be regarded as an important field for investigation (p. vii)." Many of the

adjustment problems identified by Angell and other early education researchers are recognized now as probable causes or consequences of the sophomore slump: interest, declining grades, increasing absences, and dropping out in general.

According to Hartshorne (1943), by the early 1940s, a growing body of literature on the sociology of college life had sprung into existence. According to Sanford (1956), by the mid-1950s, the study of academic psychology was considered pertinent to personality maturity in late adolescence, a time of psychological maturation that corresponded with the college years. According to Gump (2007), scholars have been cognizant of problems related to the sophomore slump for more than 50 years but have only recently begun isolating, labeling, and investigating the phenomenon. The literature supported the possibility that first-year student retention initiatives, if not extended to students in succeeding years, may postpone development or expression of problems until the sophomore year. This may ultimately lead to attrition (Gump, 2007). Pattengale and Schreiner (2000) further explained the current need to center more consideration on sophomores. With all the support and programming that institutions are providing in the first year, reality frequently does not hit until the sophomore year which is typically when the institution relaxes or withdraws support. Gump (2007) suggested that since the 1950s much of the research has used emerging student development theories to study the sophomore slump. Perry (1970) suggested that the sophomore slump may be a developmental issue. Other retention research, influenced by the work of Tinto (1975, 1982, 1987), has broadened the to include the study of institutional consequences. Although instructors and advisers have been identified as positively impacting retention (Braxton, Bray, & Berger, 2000;

Pascarella, 1980; Terenzini & Wright, 1987), their roles in mitigating possible negative outcomes of the sophomore slump are mentioned in the literature. Pascarella and Terenzini (2005) reviewed studies on many of the pertinent issues, including retention, attrition, effective instruction, and student development, but, in their summary *How College Affects Students*, they do not frequently mention the sophomore slump. Gump (2007) suggested that it is possible that no significant studies reporting adequate information relevant to the sophomore slump have been reported.

Importance of mentoring programs for sophomores.

Even though sophomores have received little attention in research literature, were indications that sophomores face academic difficulties (Graunke & Woosley, Pattengale and Schriener (2000) suggested that the sophomore year may be a critical point in which students disengage from academic life, consequently adversely their grades. Tinto (1993) intimated that the important issues causing distress for year students may not be important to students at other levels in college. Most of the research concerning retention has centered primarily on first-year students. More research is needed for other class levels -- in particular sophomores. Over the past two decades, much research has been dedicated to why students succeed in college. In particular, sophomores are at a point in their academic career where colleges need to particularly aware of significant issues. Increasingly, the second year has been viewed a time of limbo in which students try to firm up their career decisions and personal (Anderson & Schreiner, 2000; Boivin, Fountain, & Baylis, 2000). Gardner, Pattengale, & Schreiner (2000) suggested that sophomores were more apt than other students to

that "confirming their major selection or deciding on an appropriate career was their biggest personal problem (p. 72)."

According to Pattengale and Schreiner (2000), college leaders felt that they have accomplished the goal of retaining students after the first year, and their concentration may now be focused on the next freshman cohort. During this time, not all sophomores have discovered a major or have become particularly involved in classes in their major. Consequently, sophomores have limited relations with faculty in their major. A large number of sophomores have not had opportunities for campus leadership and receive little attention from student affairs (Pattengale & Schreiner, 2000); therefore, sophomores may be comparatively isolated from significant contact with other faculty. This can lead to sophomores becoming progressively more distant from the institution and more occupied with individual activities.

Gardner, Pattengale, & Schreiner, (2000) found that sophomores live in their own world which runs "counter to the academic path of the engaged learner (p.73)." Sophomores are less likely than other students to be actively concerned with their own learning or to recognize faculty as engaged in their personal and academic growth. They also spend less time than other students involved in academic activities and more time caught up in social activities. These results are particularly concerning when the findings of other researchers are considered. Juillerat (2000) indicated that sophomores at private colleges deemed factors like a sense of belonging and accessible faculty as more essential to their success than freshmen, juniors, or seniors. Taken as a whole, the research indicates that sophomores could have requirements that vary from students at other levels, and those requirements are being disregarded by higher education institutions.

Despite the potential issues connected with sophomores, comparatively, modest research has focused on this group of students. Tinto (1993) suggested that "long-term retention efforts beyond the first year should focus on three major sources of student departure: academic difficulties, the inability of individuals to resolve their education and occupational goals, and their failure to become or remain incorporated in the intellectual and social life of the institution (1993, p. 176)." Tinto also indicated that institutional commitment "arises from and is demonstrated in the everyday interaction among students, faculty, and staff in the formal and informal domains of institutional life" (1993, p.201). Tinto asserted that students who develop satisfying peer relationships tend to earn higher grades and are more inclined to remain in college (Foley Nicpon et al., 2006). Plunkett, Henry, Houltberg, Sands, and Abarca-Mortensen (2008) also found a significant relationship between academic support from family and instructors and positive academic outcomes. Overall, as students' academic and social integration and institutional and goal commitment increase, the likelihood that they will persist at the institution also increases (Pascarella, 1980).

Academic success defined.

Ditchkoff, Laband, and Hanby (2003) studied the academic success of transfer and native students in a wildlife science undergraduate program at Auburn University. The study focused specifically on the academic performance of students using grade point average as the measure of academic performance as it was identified as a universally accepted measure of student academic success in higher education. studies have also identified measures of academic success. Much of the research associated with academic success, identifies student persistence and GPA as measures

academic achievement (Edman & Brazil, 2009). Many universities have attempted to

measure academic success using academic achievement measured by grade point

average, class rank, and scores on standardized tests such as the Scholastic

Test (SAT) and American College Testing (ACT) (Coll & Stewart, 2002; Oliver, Guerin, &

& Gottfried, 2007) .

Pintrich (2004) substantiated a broader concept of academic success which

takes into consideration multiple social, cognitive, and non-cognitive variables which

may improve the ability to understand and predict academic success. There are many

valid measures of academic achievement for college students, but there is currently no

multifaceted, self-report instrument that globally evaluates academic success beyond

academic achievement and cognitive skills used in current research. Students who

have a greater identification with academics generally achieve greater academic

success related to grades and are less likely to depart before earning a degree.

Support from peers and faculty have been associated with campus belonging,

academic success, persistence, and GPA (Booker, 2007 as cited in Edman & Brazil,

2009). An effective measure of student success assesses cognitive and non-cognitive

factors related to academic achievement (Booker, 2007).

Transition to College Inventory.

The *Transition to College Inventory (TCI)* is a broad survey instrument that has

been designed to evaluate non-cognitive variables among freshmen. These variables

include attitudes, opinions, and self-ratings. The non-cognitive variables assessed by

TCI are intended to produce a score and are measured using many factors including

whether students have well-defined career plans, plan to attain a degree, believe the

university to be the key focal point of their lives, and plan to work at least 11 hours a week during their first semester (Pickering, Calliotte, & McAuliffe, 1992). According to Pickering et al. (2005), the *TCI* is a non-cognitive measure intended to augment the predictions of academic success based exclusively on cognitive and demographic Cognitive factors include high school GPA and standardized test scores such as the SAT and ACT. Demographic factors include gender, race, and first generation college The *TCI* is a self-report instrument that measures attitudes, personality and behaviors along with predictions about performance and involvement in college. This instrument is intended to be administered before, or at the beginning of, the student's first year of college.

History and use of the TCI.

Originally, the *TCI* was developed to identify students who were at risk for academic difficulty and who were highly at risk of dropping out. The creators of the *TCI* developed and tested the instrument over a ten year period, including a major revision of the instrument in 2003 in preparation for use at other higher education institutions. According to Duggan and Pickering (2007-2008), the *TCI* was developed based on the work of many scholars and has been largely based on the research of the following: Tinto's student retention work; Astin's research; and Sedlacek's research on non-cognitive questionnaires. The *TCI* Index is used to identify at-risk students resulting from student self-reported answers to the *TCI*. The *TCI* indices predict the level of risk associated with the student not persisting (Pickering, Calliotte, Macera, & Zerwas,2006).*TCI* was originally designed to facilitate understanding of at-risk first-year students and is divided into the following sections:

1. Reasons for attending college;

2. Reasons for choosing this particular college;

3. Experiences during the senior year of high school;

4. Self-ratings of abilities and traits;

5. Attitudes concerning being a college student;

6. Predictions about academic success in college; and

7. Predictions about involvement in college (Pickering et al., 2005).

According to Pickering et al. (2005), individual responses to the *TCI* produce the *TCI* Index as well as nine factors which can be used to interpret and determine treatment for at-risk students. The *TCI* Index can be used to discover students who may be at-risk for academic difficulty. The individualized *TCI* Advising Profile is created and displays the *TCI* Index and the student's answers to all of the factors that comprise the *TCI* Index for that particular student. This structure allows academic advisors and/or counselors the opportunity to evaluate the *TCI* Advising Profile with the student and to create a plan for navigating potential problem areas. These nine factors highlight broader areas which may impact a student's academic success. These factors can be analyzed independently or can be used to develop a student profile across a particular population (Pickering et al., 2005).

In this study, scales from the *TCI* will be used to study non-cognitive measures student performance. Two scales from the *TCI* that are designed to identify patterns non-cognitive factors related to academic performance and persistence will be used sophomores in a university setting (Duggan & Pickering, 2007-2008). Because the of this research study was on the academic success of sophomores, the researcher

the Student Role Commitment Scale and the Personal/Academic Skills Confidence

from the *TCI*.

Conclusion

The body of research on mentoring revealed a high level of interest in the

nature and effectiveness of mentoring in both business and educational settings. Most

studies focused on the mentoring relationship itself or attitudes regarding a completed

mentoring experience. Some studies addressed the mentor's experience, but most

focused on the perspective of the protégé.

Few studies examined the impact of mentoring on academic performance and

retention; almost none used a control group, and none combined a control-group

research design with long-term outcomes. Given the importance of student retention

in higher education, there exists a need for methodologically strong evaluative studies

of programs designed to reduce the student dropout rate. The field needs to

incorporate more outcomes based research into the context of mentoring and

academic success for sophomores.

Support programs have developed hurriedly in the last 20 years in reaction to

concerns about the predicament of student success, student retention, and student

persistence to degree. However, the varying differences in the support needs of

freshmen, sophomores, juniors, and seniors, until recently, have frequently been

ignored. Recent growth of the literature on support services for freshmen and

sophomores has demonstrated an indication of the ever-increasing visibility of these

services and intimated that specifically designed support services could play a crucial

role in enhancing the student experience, retention, persistence to degree.

Although such specific interventions are tremendously precious, it is not always clear how or if they are integrated with other interventions, services, and components on college and university campuses. Discussions of interventions in isolation may make it difficult to gain a perspective of the larger issue of student development, especially because difficulties experienced in one life area often impact other life areas (Clark & Parette, 2002). The need to research mentor programs and establish their efficacy as academic support programs for sophomore students is further emphasized by the inherent support that flows into other areas of the student's life so that the support received transcends simple academic support.

CHAPTER THREE

METHODOLOGY AND PROCEDURES

Introduction.

Colleges and universities in the United States are under mounting pressure to increase the academic success and graduation rates of students on their respective campuses (Park, 2008-2009). The primary reason that these universities are concerned about persistence, and go to great efforts to measure persistence, is that the United States Department of Education (USDOE) recognizes persistence as the measure of a program's effectiveness. The USDOE's rankings have a strong influence on an institution's funding and prestige. "Federal data projections indicate that an overall slowing of college enrollments will occur simultaneously with growing enrollment among non-traditional students, minority populations, and lower-income students" (JLARC, 2014, p. 30-31). These students are more likely to be first generation, who may need supplementary support services to improve their retention and graduation rates. With decreased federal and state funding, colleges and universities continue to focus on retaining students. The desire for improved financial support has fueled many studies to establish strategies that will increase persistence (Rovai, 2003). "Staff at Virginia's public four-year institutions note that support services include more than just academic support, traditional advising, and mentoring" (JLARC, 2014, p. 30-31). Yet, college student retention remains a complex problem requiring wide-ranging solutions (Paredes, 2008).

Many higher education institutions are offering financial advising for students, as well as targeted advising, guided course registration, and other programs to bolster graduation rates (JLARC, 2014). The Governor's Higher Education Advisory Committee (HEAC) "developed a proposed performance funding model designed to assess institutional performance and allocate incentive funding based on a number of student outcomes: degree production, particularly in STEM-H fields; accelerated time to degree; and improved degree attainment and retention for under-represented students, including minority students, Pell grant recipients, and non-traditional adult students" (JLARC, 2014, p. 43).

According to D'Abate (2009), mentoring has emerged as an important element in programs that support the success of first-year students. Faculty and peer mentoring are often utilized to assist students' transition from high school to college, provide guidance, enhance student development, and increase students' academic success. A major challenge faced by colleges and universities is how to evaluate the effectiveness of new mentor programs that are aimed at increasing student academic success and graduation rates. If mentoring positively influences the retention and graduation of college students, then college and university administrators and practitioners should have a better understanding of the impact of mentoring on persistence to graduation as well as a method for assessing the effectiveness of the institution's mentoring programs. A quasi-experimental quantitative research design was employed evaluate the influence of a mentor program on college student persistence. The instruments utilized were the "Student Role Commitment Scale" and the "Academic

Skills Comfort Scale" from *the Transition to College Inventory (TCI)*. Academic success was assessed using cumulative GPA and retention from sophomore to junior status.

Research questions.

The research questions utilized for this study are:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as measured by cumulative GPA?

2. Does participation in an academic mentor program affect "student role commitment," as defined by the *TCI*, of sophomore students?

3. Does participation in an academic mentor program affect "academic skills confidence," as defined by the *TCI*, of sophomore students?

4. Does participation in an academic mentor program affect persistence of students from sophomore to junior standing?

Research design.

The design employed for this research study was a quantitative quasi-experimental design using *ex post facto* data and a survey instrument. In this study, the measurement of change provided a vehicle for assessing the impact of mentoring programs on sophomores. Examining the change in academic performance allowed the researcher to more accurately measure the results of the mentoring program.

Pretest-posttest designs are commonly used in research. The primary purpose this design was to compare groups and/or measure change resulting from treatments (Dimitrov & Rumrill, 2003). The central assumption of pretest-posttest research design was that, without interventions, the situation or condition in existence prior to the treatment would remain. However, as a result of the intervention or

treatment, the situation or condition would change over time. Therefore, the measured the situation or condition prior to the start of the treatment and repeated same measures after the treatment had been completed. The differences or changes between the two points in time could be attributed to the treatment or intervention (PASSIA, 2002). Research Question One focused on collecting GPA data from before and after the mentor program and sought to study the change GPA in an attempt to determine whether there was an improvement or a decline in academic performance.

The primary benefit of the pretest-posttest research design was that it was fairly easy to employ. This type of study could be implemented with the same group of participants and did not necessarily require a control group. In addition, this research study did not typically require a high level of statistical expertise and would assess progress over time through a comparison of results to baseline data (PASSIA, 2002). A control group was used to provide strength to the study.

The primary disadvantage of the pretest-posttest research design was that it was thought to lack scientific rigor (PASSIA, 2002). Numerous biases may occur between the pretest and the posttest that could impact the results and thereby weaken the link between the treatment group and the control group outcomes. Changes in the condition prior to treatment and after treatment could be attributed to other e̶x̶t̶e̶r̶n̶a̶l̶ ̶f̶a̶c̶t̶o̶r̶s̶Quantitative research design is a strict, objective, methodical procedure that numerical data to discover understanding about the world (Cooper & Schindler, 2006). Additionally, quantitative research studies use unbiased numbers to reflect that are less likely to be influenced by personal bias. Quantitative investigations are characterized by the researcher selecting what will be studied and presenting

that are intended to be analyzed through statistical procedures to produce specific and quantifiable outcomes. This particular category of investigative inquiry is designed to tender accurate numerical answers that are organized, present minimal prejudice, and grounded in impartiality (Creswell, 2005). "Using quantitative methods allows the researcher to provide a numerical description of trends of a population, attitudes, or opinions of a population by studying a sample of the population. From sample results, the researcher can generalize or make claims about the population (Creswell, 2003, p. 153)."

The researcher studied data collected from a sample of sophomores that participated in a mentoring program during Fall Semester 2011 to evaluate the results of that mentor program. According to Kirk (2005), experimental research designs state the independent, dependent, and nuisance variables and specify how the randomization and statistical analysis of an experimental procedure are to be performed. Kirk (1995) indicated that the principal objective of an experimental design was to ascertain whether a causal relationship existed between the independent and dependent variables. A lesser purpose of an experimental design was to gather the greatest quantity of data while expending the least amount of resourceThis study included a control group and a treatment group to provide strength to the research. The participants were randomly selected from the population of college sophomores. The Office of Institutional Research and Assessment (IRA) at this higher education institution randomly selected 800 sophomores from the population. The control group and treatment group came from these 800 sophomores. Grade point average was collected and the participants were given a survey to determine whether or

not the treatment had a significant effect on academic performance, "Student Role Commitment," and "Academic Skills Comfort." The design included one experimental group of students who received the treatment and one control group of students who did not receive the treatment. The students who participated in the mentor program were designated the treatment group. The group of students who did not participate in the mentor program were designated the control group. All participants were randomly selected to participate in the study (Rodger & Tremblay, 2003). The data collected were *ex post facto* data from Fall Semester 2011, and a survey was administered in Spring Semester 2013.

Participants.

Higher education research literature provides direction regarding sampling and population sizes in research. Specifically, Heiman (2006) indicated that researchers seek to create a representative sample by freely allowing the types of individuals found in the population to occur in the sample. This is accomplished through the selection of a random sample in which individuals are selected randomly from the population. By not influencing which participants are chosen, the different types of individuals are free to occur in the sample in the same way they do in the population and are considered to be a representative sample because it should match the population. A representative sample increases the likelihood that scores from the sample will match scores that could be expected from the population. Therefore, in an effort to obtain a sample which was representative of the general population, in this study, subjects were chosen using a random sample approach.

The participants in the experimental group were sophomores at a large university on the east coast who agreed to participate in a mentor program specifically designed for sophomore student academic success. Using random selection, Institutional Research and Assessment selected a sample of 800 sophomore students using the institution's definition of sophomore. A sophomore was defined as any student who had earned at least 26 credits but not more than 58 credits (*Old Dominion University Catalog*, 2012). The academic mentor program administrator invited 800 sophomores to participate in the academic mentor program. Students who chose to participate in the mentoring program were designated as the experimental group. Students who chose not to participate in the mentor program were defined the control group sophomores at the same large university on the east coast who were enrolled in Fall Semester 2011. They originated from diverse backgrounds. Gender breakdown was determined and analyzed to determine if there were significant differences. Further, demographic information was provided to the researcher in aggregate form from the Office of Institutional Research and Assessment.

Measures.

Academic performance of the experimental group was assessed by analyzing cumulative grade point averages of the participants in the experimental group at the of Fall Semester 2011 and comparing them with the GPAs from the beginning of Fall Semester 2011 and the beginning of Fall Semester 2012. The average GPA change of participants in the academic mentor program from Fall Semester 2011 and Spring Semester 2012 and to Fall Semester 2012 was compared to the average GPA change of the participants in the control group for those time periods. The students' cumulative

GPA was chosen as a measure of academic performance as it is common to all

the study and was used by the university to reflect academic performance.

In addition, grade point average is recognized by most institutions of higher

education in the United States as a measure of academic performance. This speaks to

the reliability and validity of the measure employed by the researcher. According to

Astin (1993), GPA, even with its restrictions, seems to be a sign of a student's actual

learning and development during their time as an undergraduate student. Data

collected from this measure was used to answer Research Question One.

The *Transition to College Inventory* (*TCI*) was utilized to assess the following

non-cognitive factors, "Student Role Commitment" and "Academic Skills Comfort."

These two factors were measured using the *TCI* survey instrument. The survey was

given to both the control and the experimental groups during Spring Semester 2013

and compared to the factor scores from the student's freshmen year as collected by

the institution's Office of Institutional Research.

Persistence from sophomore to junior year was also compared. Persistence

was measured at the end of Fall Semester 2012. The persistence rates for the control

and treatment groups were compared.

Description of the instrument.

Caldwell (2002) acknowledged two ways of evaluating student motivation.

two methods were observations and surveys. The researcher used a quantitative

design, thus making the use of a survey instrument more appropriate. For this study

Transition to College Inventory was the survey instrument employed to collect data on

the "Student Role Commitment" and the "Academic Skills Comfort" of the sophomores in the study.

According to Duggan and Pickering (2007-2008), the *TCI* was developed based on the work of many scholars and has been largely based on the research of the following: Tinto's student retention work; Astin's research; Sedlacek's research on non-cognitive questionnaires. The *TCI* Index is used to identify at-risk students resulting from student self-reported answers to the *TCI*. The *TCI* Indexes predict the level of risk associated with the student not persisting (Pickering, Calliotte, Macera, & Zerwas, 2005). *TCI* is a broad self-report survey instrument which has been designed to evaluate non-cognitive variables among freshmen. These variables include attitudes, opinions, and self-ratings. The non-cognitive variables assessed by the *TCI* are intended to produce a score and are measured using many factors including whether students have well-defined career plans, plan to attain a degree, believe the university to be the key focal point of their lives, and plan to work at least 11 hours a week during their first semester (Pickering, Calliotte, & McAuliffe, 1992).

According to Pickering et al. (2005), the *TCI* was intended to augment the predictions of academic success based exclusively on cognitive and demographic factors. Cognitive factors include high school GPA and standardized test scores such as the SAT and ACT. Demographic factors include gender, race, and first generation college status. The TCI measures attitudes, personality characteristics, and behaviors along with predictions about performance and involvement in college. This instrument is intended to be taken before, or at the beginning of, the student's first year of college.

Originally, the *TCI* was developed to identify students who were at risk for

academic difficulty and who were highly at risk of dropping out. The creators of the

TCI developed and tested the instrument over a ten year period and included a major

revision of the instrument in 2003 which prepared the instrument for use at other

higher education institutions. The *TCI* was originally designed to facilitate

understanding of at-risk first-year students.

The *TCI* is divided into the following sections:

1. Reasons for attending college;

2. Reasons for choosing this college;

3. Experiences during the senior year of high school;

4. Self-ratings of abilities and traits;

5. Attitudes concerning being a college student;

6. Predictions about academic success in college; and

7. Predictions about involvement in college (Pickering et al., 2005).

According to Pickering et al. (2005), individual responses to the *TCI* produce

TCI Index as well as nine factors which can be used to interpret and decide on

for at-risk students. The *TCI* Index can be used to discover students who may be at-

for academic difficulty. The individualized *TCI* Advising Profile is created and displays

the *TCI* Index and the student's answers to all of the factors that comprise the *TCI*

for that particular student. This structure allows academic advisors and/or counselors

opportunity to evaluate the *TCI* Advising Profile with the student and to create a plan

navigating potential problem areas. The nine factors highlight broader areas which

impact a student's academic success. These factors can be analyzed independently or

can be used to develop a student profile across a particular population (Pickering et al., 2005).

In this study, scales from the (*TCI*) were used to study non-cognitive measures of student performance to evaluate the results of the peer mentoring program provided by the institution during Fall Semester 2011. Two scales from the *Transition to College Inventory* which were designed to identify patterns of non-cognitive factors that are related to academic performance and persistence were used with sophomore students in a university setting (Duggan & Pickering, 2007-2008). Because the focus of this research study was on the academic success of sophomore students, the researcher used the "Student Role Commitment Scale" and the "Academic Skills Confidence Scale" from the *TCI*.

According to Pickering, Calliotte, Macera, and Zerwas (2005) the *TCI* is a reliable and valid measure when used to predict academic difficulty among first year students. Reliability was established through a factor analysis that identified nine factors among the 115 items. Criterion-related validity of the factors was established through logistic regression. Criterion validity of the *TCI* Index was also verified through data showing that there was an increasing rate of students in academic difficulty as the *TCI* Index increased

Data collection procedures.

The researcher collected *post hoc* data from Institutional Research and Assessment. The mentor program included 800 students randomly selected from the sophomore population and who were offered participation in the academic mentor program. The students who elected to participate in the academic mentor program

deemed the experimental group. The students who did not elect to participate in the academic mentor program were deemed the control group. Participation in the was voluntary. Participants could decide to discontinue participation in this program evaluation at any time.

Professional mentors were selected from a pool of applicants who had earned at least a bachelor's degree. This level of education was used to ensure that the mentors better understood the rigors of college. The mentors who were hired received both initial and ongoing training throughout the program. Each mentor was responsible for a group of 25 to 30 students.

In early Fall Semester 2011, approximately 800 randomly selected sophomores received an email informing them that they had been invited to participate in the Academic Mentor Program. Students from this random selection who chose to participate were sent an email explaining the program and its benefits. These students were informed that only 120 places were available, and participants would be accepted on a first-come, first-served basis. Those students who chose to participate in the program were considered the experimental group. The other sophomores who chose not to take part in the Academic Mentor Program were then asked to participate in this study by completing a survey during Spring Semester 2013; however, since this was deemed the control group, these students completed only the same survey instrument as the experimental group and did not receive the mentoring treatment. Participation in the study for control group participants was voluntary. Students in the control group were able to withdraw at any point in the study.

All individual results were treated as confidential and anonymous. Results were reported in aggregate form. All data were collected by Institutional Research and Assessment (IRA) and stored on the university's secure servers. The researcher received the data set after all individual identifying markers had been removed.

Mentors initiated and maintained contact with their mentees in the form of a weekly meeting. Mentors were instructed not to tutor their sophomores, but, instead, mentors were encouraged to share their own experiences of being a student in their undergraduate institution in an effort to help the sophomores prepare for their academic challenges. The mentors provided information on academic resources as well as study skills and test-taking strategies to help their students learn to cope and mature on their own. This message was reinforced during the training phases and weekly meetings with mentors.

The withholding of tutoring by the mentor was considered to be important for two reasons. First, research has identified that one of the goals of such a program was to help students become familiar with the university's resources and to develop the study skills necessary for academic success. The administration of tutoring by mentors could interfere with the accomplishment of these goals and the study's ability to assess the efficacy of the mentor program.

Second, it would be impossible to determine the level of tutoring skills and/or knowledge possessed by each mentor; this could vary widely from mentor to mentor and could negatively impact the intended goal of helping sophomores learn to be more academically successful through the use of institutional resources as well as helping students to become more independent learners (Salinitri, 2005).

Each of the mentors met weekly with the other mentors as well as with the Peer Educator Coordinator. These meetings were standard in that weekly topics followed the course of the academic year. An example of the weekly topics included the provision of study tips approximately two weeks before the start of midterm exams. Another example was related to discussing learning styles and how students could use their learning styles to develop strategies and practices to study more effectiv followoing these weekly meetings, mentors met with their sophomores and informed them about what they had learned. This helped to ensure that participants were receiving fundamentally the same information and resources at around the same time. Regular activities varied little among mentors. Activities included regular weekly meetings featuring study tips and introductions to campus resources such as library services, advice on how to act and conduct oneself in a class, and how to approach a professor for help.

Students who were assigned a mentor were encouraged (through modeling and support from their mentor) to take advantage of the many academic resources available on campus. Examples of these resources are learning skills workshops and library orientation sessions, and becoming involved in the campus community and the off-campus community. Regular activities were included. Students were asked to meet with their professors at least once during the semester.

The program was administered throughout Fall Semester 2011. GPA data were collected from Fall Semester 2011 and Fall Semester 2012. The introduction letter explained the purpose of the study as well as stipulated that participation in the study voluntary and that any participant could stop participation at any point without any

negative consequences for dropping out of the study (see Appendix B for the letter).

The researcher presented this proposal and all associated methods and procedures to the institution's College of Education Human Subjects Review Committee. The Committee reviewed the proposal before the study was conducted. Further, the Human Subjects Review Committee was able to ask questions and make suggestions for participant protection based on the information provided in the proposal should they choose to do so. Once the Committee communicated its approval to move forward with the study, the researcher began data collection.

Academic performance was assessed by reviewing cumulative GPA data of students before and after Fall Semester 2011 Semester and after Fall Semester 2012. The survey employed used the "Student Role Commitment" and the "Academic Confidence" scales from the *Transition to College Inventory (TCI)*. Additional data to be compiled by an IRA staff member included the following: student retention rates from Fall Semester 2011 to Fall Semester 2012 and college academic performance during Fall Semester 2011 and the 2011-2012 academic years. All data were compiled by an IRA staff member so the researcher had one dataset with multiple variables. Data were housed on a university-secured server, accessible only to IRA staff members and the researcher. Data were viewed by only the researcher and the IRA staff member who compiled those data. Findings from those data were reported in aggregate form. After analyses, data were deleted from IRA's secured server and destroyed by the researcher no later than March 14th, 2014.

Limitations of the study.

Threats to the validity of a study are a limitation of the study. Internal validity is the extent to which the experimental treatment makes a difference in (or causes change in) the specific experimental settings. External validity is the extent to which the treatment effect can be generalized across populations and measurement instruments (Dimitrov & Rumrill, 2003). Factors which serve as threats to internal validity and limitations for this study include maturation, pretest effects, and statistical regression toward the mean.

Other limitations specific to this research study included the following. The study was conducted at only one institution. This prevents generalizing the findings to other institutions without further research. Another threat was that data collected was from only the 2011-2012 academic year. The study examined only sophomores which made the findings less generalizable to freshmen, juniors, or seniors. Additionally, the findings were less generalizable to other types of institutions which may differ in significant ways from the host institution.

Variables.

Control variables are those which were kept constant during the study. The first control variable that remained constant among the participants was their full-time enrollment status. This study sought to determine whether the results of the peer mentor program had an effect on the academic performance, student role commitment, or academic/personal skills confidence. The second variable which remained constant across the groups was their sophomore class status. The third control variable was that all students in the study were enrolled at the same higher education institution.

The dependent variable is what is being measured in the experiment. The first dependent variable was the academic performance of the students measured by the student's grade point average. The second dependent variable was the student role commitment of sophomores and the academic/personal skills confidence of sophomores. It was measured using a survey instrument incorporating the "Student Role Commitment" and "Academic Concerns" scales from the *TCI* to measure the level of scholastic motivation of students.

The independent variable, for the purposes of this study, was the mentor program. It was the manipulated variable. The experimental group was a part of a mentor program in which the students were paired with a professional mentor for regular meetings. The control group was a group of students that did not meet with the mentors and were compared to the treatment group during analysis.

Analysis of data.

Academic performance was assessed by analyzing cumulative GPA data after Fall Semester 2011 and Fall Semester 2012. The average change in the mentor program participants' (the treatment group) cumulative GPAs from fall semester to spring semester was compared to the average change in the non-mentor program participants' (the control group) cumulative GPAs from fall semester to spring semester at the end of Fall Semester 2011 and Fall Semester 2012 semester.

The students' cumulative GPA was chosen as a measure of academic as it was common to all students in the study and was used by the university to reflect academic success. For Research Question One, a *t*-test for independent samples was employed to determine if there was a statistically significant difference in the average

change from the fall to spring cumulative GPA of the students in the control group and the treatment group after participation in the program. According to Gravetter and Wallnau (2008), an independent t-test is utilized when a researcher uses data from samples to evaluate the mean difference between the two groups. The researcher a .05 level of significance for use in the t-test for independent samples. The Statistical Program for Social Science, SPSS Version 17, was employed to analyze these data and perform the independent samples t-test.

The comparative analysis of the students GPAs was utilized to answer the first research question in this study:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as defined by cumulative GPA?

The cumulative GPA change from Fall Semester 2011 to Fall Semester 2012 from the treatment group and the control group was compared and analyzed to answer the first research question identified by the researcher.

The scores on the *TCI* factor "Student Role Commitment" from the treatment group and the control group were compared and analyzed to appropriately answer the second research question:

2. Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore students?

A t-test for independent samples was employed to determine if there was a significant difference in the scores of the control group and the treatment group on *TCI* scales from the time it was taken prior to beginning college and the end of Spring Semester 2012. The researcher utilized a .05 level of significance for use in the t-test

independent samples. The Statistical Program for Social Science, SPSS Version 17, was employed to analyze these data and to perform the *t*-test.

The scores on the *TCI* scale "Academic Skills Confidence" from the treatment group and the control group were compared and analyzed to appropriately answer the third research question:

3. Does participation in an academic mentor program affect the "academic skills confidence," as defined by the *TCI*, of sophomore students?

A *t*-test for independent samples was employed to determine if there was a statistically significant difference in the scores on the academic/personal skills confidence scale of the students in the control group and the treatment group after participation in the program. The researcher utilized a .05 level of significance for use in the t-test for independent samples. The Statistical Program for Social Science, SPSS Version 17, was employed to analyze these data and to perform the *t*-test.

The persistence rate of the treatment group and the control group from Fall 2011 to Fall 2012 were compared and analyzed to appropriately answer the fourth research questioDoes participation in an academic mentor program affect the persistence of

students from sophomore to junior standing?

A Chi-square test for independence was employed to determine if there was a statistically significant association in the control and treatment groups and persistence from sophomore status to junior status after participation in the program. The researcher utilized a .05 level of significance for use in the Chi-square test for independence. The Statistical Program for Social Science, SPSS Version 17, was employed to analyze these data and to perform the Chi-square test for independence.

Summary

Chapter Three discussed the methodology employed to evaluate the mentor program in this study. The population and sample processes were described. The survey instruments which were used and the background of each were discussed. This chapter also described the data collection procedures and the statistical analyses which were employed to analyze results.

The chapter reviewed the research questions that were used to guide the study. The researcher addressed how each research question was explored and the statistical method that was employed to analyze and answer each question. Chapter Four addresses the results of the data collection and the analysis of the data. Conclusions, implications and recommendations for further research will be provided in Chapter Five.

CHAPTER FOUR

PRESENTATION OF DATA

Introduction.

This study was conducted to discover and report the relationship between mentoring and the academic success of sophomore college students. This study explored both cognitive and non-cognitive outcomes and persistence of college sophomores. The overall findings of the study are presented in this chapter. Specifically, the statistical and supporting findings and data analyses as related to the relationship of mentoring on college student academic success are presented. For the purpose of this study, academic success was measured by grade point average (GPA), the Transition to College Inventory (TCI), and persistence. The results are presented through the following statistical analyses:

To answer the four research questions, data gathered in response to the survey as well as the associated results are presented in this chapter. The research questions are as follows:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as defined by cumulative GPA?

2. Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore students?

3. Does participation in an academic mentor program affect the "academic skills confidence," as defined by the *TCI*, of sophomore students?

4. Does participation in an academic mentor program affect the persistence of students from sophomore to junior standing?

Review of study.

Academic performance was assessed by analyzing cumulative GPA data after Fall Semester 2011 and Fall Semester 2012. The average change in the mentor program participants' (the treatment group) cumulative GPAs from fall semester to spring semester were compared to the average change in the non-mentor program participants' (the control group) cumulative GPAs from fall semester to spring semester at the end of Fall Semester 2011 and at the end of Fall Semester 2012.

Student cumulative GPA was chosen as a measure of academic performance as GPA is common to all students in the study. In addition, the university uses the cumulative GPA to reflect academic success. For Research Question One, a *t*-test for independent samples was employed to determine if there was a statistically significant difference in the average change in the fall to spring cumulative GPAs of students in the control group and in the treatment group after participation in the program. The comparative analyses of student cumulative GPAs were utilized to answer the first research question in this study:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as defined by cumulative GPA?

The difference in the Fall Semester 2011 and the Fall Semester 2012 cumulative GPAs from the treatment group and the control group were compared and analyzed to appropriately answer the first research question.

The scores on the TCI factor, "Student Role Commitment," from the treatment group and the control group were compared and analyzed to appropriately answer the second research question.

2. Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore students?

A *t*-test for independent samples was employed to determine if there was a statistically significant difference in the scores of the control group and the treatment group on the TCI scales. The first score was assessed when the student initially completed the TCI prior to matriculation at this institution, and the second score was assessed at the end of Spring Semester 2012.

The scores on the TCI scale, "academic/personal skills confidence," from the treatment group and the control group were compared and analyzed to appropriately answer the third research question:

3. Does participation in an academic mentor program affect the "academic skills confidence," as defined by the *TCI*, of sophomore students?

A *t*-test for independent samples was employed to determine if there was a statistically significant difference in the scores of the control group and the treatment group on the academic/personal skills confidence scale of the TCI. These scores were assessed after participation in the program.

The retention rate of students from Fall Semester 2011 to Fall Semester 2012 for the treatment group and the control group were compared and analyzed to appropriately answer the fourth research question:

4. Does participation in an academic mentor program affect the persistence of

    students from sophomore to junior standing?

A Chi-square test for independence was employed to determine if there was a

statistically significant association in the control group and the treatment group and in

persistence from sophomore status to junior status after participation in the program.

Survey instrument.

The Transition to College Inventory is a broad survey instrument which has

been designed to evaluate non-cognitive variables among college students. These

variables include attitudes, opinions, and self-ratings. The non-cognitive variables

assessed by the TCI are intended to produce a score (Pickering, Calliotte, & McAuliffe,

1992). According to Pickering et al. (2005), the TCI is a non-cognitive measure

intended to augment the predictions of academic success based exclusively on

cognitive and demographic factors. The TCI is a self-reported instrument that

measures attitudes, personality characteristics, and behaviors along with predictions

about performance and involvement in college.

In this study, scales from the TCI were used to study non-cognitive measures of

student performance. Two scales from the TCI that are designed to identify patterns

of non-cognitive factors related to academic performance and persistence were used

with sophomores in a university setting (Duggan & Pickering, 2007-2008). Because

the focus of this research study was on the academic success of sophomores, the

researcher used the Student Role Commitment Scale and the Personal/Academic Skills

Confidence Scale from the TCI.

Findings

Data were collected, cleaned, and coded prior to performing statistical analysis. All responses to the survey were tabulated using the software program, Statistical Package for the Social Sciences (SPSS), Version 17.0. Descriptive statistics were used to describe the basic features of the data in this study as they provided simple summaries about the sample.

Overview of data collection, timeline, and responses.

Each participant identified through the previously described methodology was emailed the introductory letter along with a link to the online survey. In the introductory email, the subjects were informed of the purpose of the survey and asked to complete the survey. In follow up emails, subjects were reminded of the purpose of the survey and also asked to complete the survey along with a 'thank you' for participation and for their contribution to the research (see appendix C for the follow up email). Participants who had not completed the survey were emailed twice per week, on Tuesdays and Fridays, requesting that they complete the survey and thanking them for their contribution to the research. Email reminders were sent for a total of eight weeks to ensure that all participants who wanted to complete the survey had an opportunity to do so. No new surveys were completed after the sixth week.

The response rate for the treatment group was 30 responses with 29 surveys completed of the 130 sent. This is a 22.5% response rate for the treatment group. With the control group, 122 participants started the survey, and 78 of 557 participants completed the survey for a response rate of 14%.

The researcher discussed the response rates and the sizes of the completed groups with a subject-matter expert in the Office of Assessment at this higher education institution. Given that there was a large difference in the size of the control group and the treatment group, at the recommendation of the subject-matter expert, the researcher took a random sample of the control group responses to compare to the treatment group responses. The assessment subject-matter expert recommended taking a random sample of thirty from the control group responses to compare to the treatment group responses (Peredes, personal communication).

Research question 1.

Does participation in an academic mentor program improve academic

performance of sophomore students, as defined by cumulative GPA?

Table 1. Independent Samples Test: Change in Grade Point Average Fall Semester 2011 to Spring Semester 2012

Independent Samples Test Change in GPA Fall 2011 to Spring 2012

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.356	.551	2.512	715	.012	.06718	.02675	.01466	.11969
Equal variances not assumed			2.753	230.815	.006	.06718	.02440	.01909	.11526

Before completing the analysis, the change in GPA from Fall Semester 2011 to

Spring Semester 2012 was computed. The results showed an average positive change

of 0.69% in the GPA for the control group and an average positive change of 9.35% in

the GPA for the treatment group. An independent samples t-test was utilized to

determine whether there were statistically significant differences in the mean change

in the GPA between the control group and the treatment group from Fall Semester

2011 to Spring Semester 2012.

In this study, the dependent variable was students who had been mentored, and the independent variable was GPA. The null hypothesis was if p > .05, there is no statistically significant difference in the mean GPA change of the two groups from Fall Semester 2011 to Spring Semester 2012. The results of the independent samples t-test showed that the p value was .012. Since the p value was less than .05, the null hypothesis was rejected. There was a statistically significant difference in the change in GPA of the control group and the GPA of the treatment group.

Table 2.   Independent Samples Test for Research Question 2:   Change in Grade Point Average Fall Semester 2011 to Fall Semester 2012

Independent Samples Test Change in GPA Fall 2011 to Fall 2012

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	1.059	.304	3.102	715	.002	.1034	.0333	.0379	.1688
Equal variances not assumed			2.982	196.474	.003	.1034	.0347	.0350	.1717

Before completing the analysis, the change in GPA from Fall Semester 2011 to Fall Semester 2012 was computed. The results showed that there was an average of -1.08% for the control group and an average change of 0.87% for the treatment

An independent samples t-test was utilized to determine whether there were any

statistically significant differences in the mean change in the GPA between the control

group and the treatment group from Fall Semester 2011 to Fall Semester 2012.

In this study, the dependent variable was students who were mentored, and

the independent variable is GPA. The null hypothesis is if $p > .05$, there is no

statistically significant difference in the mean GPA change of the two groups from Fall

Semester 2011 to Fall Semester 2012.

The results of the independent samples t-test show that the p value was .002

which was less than .05; therefore, the null hypothesis was rejected. Therefore, was a

statistically significant difference in the control group and the treatment group.

Research question 2

Does participation in an academic mentor program affect the "student role

commitment," as defined by the *TCI*, of sophomore students?

Table 3. Change in TCI Student Role Commitment

Independent Samples Test Change in TCI Student Role Commitment

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	95% Confidence Interval of the Difference Lower	Upper
Equal variances assumed	.405	.527	.041	57	.968	.0517	1.2677	-2.4867	2.5902
Equal variances not assumed			.041	56.368	.968	.0517	1.2646	-2.4812	2.5847

Before completing the analysis, the change in the student role commitment score was computed. The results showed that there was an average change of -19.9 for the control group and an average change of -20.52 for the experimental group. An independent samples t-test was utilized to determine whether there were any statistically significant differences in the mean change in the TCI score "Student Role Commitment" between the control group and the treatment group. The dependent variable was students who had been mentored. The null hypothesis is if $p > .05$, there is no statistically significant difference in the mean change in the "Student Role Commitment" score of the two groups.

The results of the independent samples t-test showed that the p value was .968

which is greater than .05; therefore, the null hypothesis was accepted. There was no

statistically significant difference in the control group and the treatment group.

Research question 3

Does participation in an academic mentor program affect the "academic skills

confidence," as defined by the *TCI*, of sophomore students?

Table 4. Change in TCI Academic Skills Confidence

Independent Samples Test

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	95% Confidence Interval of the Difference Lower	Upper
Equal variances assumed	.031	.861	-.377	57	.708	-.3954	1.0501	-2.4983	1.7075
Equal variances not assumed			-.376	55.999	.708	-.3954	1.0519	-2.5027	1.7119

Before completing the analysis, the researcher computed the change in the "academic

skills confidence" score. The results showed that there was an average change of -

for the control group and an average change of -12.72 for the treatment group. The

dependent variable was students who had been mentored.   The null hypothesis is if p

.05, there is no statistically significant difference in the mean change in the "academic

skills confidence "score of the two groups. The results of the independent samples t-

showed that the p value was .708 which is greater than .05; therefore, the null

was accepted. There was no statistically significant difference in the control group

the treatment group.

Research question 4

Does participation in an academic mentor program affect the persistence of

students from sophomore to junior standing?

Table 5. Retention of Control Group and Treatment Group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.097[a]	1	.148		
Continuity Correction[b]	1.765	1	.184		
Likelihood Ratio	2.016	1	.156		
Fisher's Exact Test				.153	.094
N of Valid Cases	717				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 26.94.
b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.054	.148
	Cramer's V	.054	.148
N of Valid Cases		717	

Before completing the analysis, the retention rate of the control group and the retention rate was computed for the treatment group from Fall Semester 2011 to Fall Semester 2012. The results showed that the control group had a retention rate of 81.1% from Fall Semester 2011 to Fall Semester 2012, and the treatment group had a retention rate of 76.3% from Fall Semester 2011 to Fall Semester 2012. In this study, the dependent variable was students who had been mentored. The null hypothesis is if $p > .05$, there is no statistically significant difference in retention rates of the two groups from Fall Semester 2011 to Fall Semester 2012.

The results of the Chi Square analysis showed that the p value was .148 which is greater than .05; therefore, the null hypothesis was accepted. There was no statistically significant difference in the control and treatment groups.

Summary

This chapter presented the findings of the study in terms of descriptors and data analysis. The research questions guiding the study were examined and reviewed. Research questions were answered with results from the independent samples t-test, the Chi Squared Test for Independence, and descriptive statistics. In order to further explore the findings, statistical analyses to investigate the relationships between the independent and the dependent variables. Chapter Five includes a summary of the study, discussion, limitations of the study, conclusions, and recommendations for future research.

CHAPTER FIVE

PRESENTATION AND ANALYSES OF DATA

Introduction.

This chapter provides an overview of this quasi-experimental quantitative study. It presents an overview of the study, major findings, conclusions, and implications for policy, practice, and future research. In addition, the limitations of the study are discussed. The conclusions presented are based on the study's findings as are associated recommendations, which focus on opportunities for further research as well as implications for policy and practice.

In Chapter Four, the researcher sought to answer the four research questions and presented data collected via the survey instrument. Tables were provided to present numerical data used in the analyses to determine the effect of mentoring on the academic success of sophomores. The results are summarized in this chapter.

Overview of the study.

The following four research questions guided this study and were presented in relation to the aforementioned variables:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as defined by cumulative GPA?

2. Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore?

3. Does participation in an academic mentor program affect the "academic skills confidence," as defined by the *TCI*, of sophomore students?

4. Does participation in an academic mentor program affect the persistence of students from sophomore to junior standing?

Summary of findings.

Each participant, who was identified through the previously described methodology, was emailed the introductory letter along with a link to the online survey. In the introductory email, the subjects were informed of the purpose of the survey and also asked to complete the survey. In follow up emails, subjects received a reminder, asking that the survey be completed and thanking the participants for their contribution to the research. Participants who had not completed the survey were emailed twice per week on Tuesdays and Fridays requesting that they complete the survey and thanking them for their contribution to the research. Email reminders were sent for a total of eight weeks to ensure that all participants who wished to complete the survey had an opportunity to do so. No new surveys were completed after the sixth week. The response rate for the treatment group was 30 responses with 29 surveys completed of the 130 sent. This is a 22.5% response rate for the treatment group. With the control group, 122 participants began the survey, but only 78 of 557 participants completed the survey for a response rate of 14%.

Interpretation of findings.

This section highlights the major findings from the four research questions examined. Each question is presented with the major findings following. The researcher also discusses the findings along with any implications associated with each research question.

Research question 1.

Does participation in an academic mentor program improve academic

performance of sophomore students, as defined by cumulative GPA?

An independent samples t-test was utilized to determine whether there were

statistically significant differences in the mean change in the GPA between the control

group and the treatment group from Fall Semester 2011 to Spring Semester 2012.

There was a statistically significant difference in the change in GPA of the control

group and the treatment group. The results showed an average positive change of

0.69% in the GPA for the control group and an average positive change of 9.35% in the

GPA for the treatment group from Fall Semester 2011 to Spring Semester 2012. This

finding indicates that mentoring may have a positive effect on the academic

performance of sophomore students during the semester in which they are being

mentored.determine if there was a long term effect of mentoring on academic success,

the researcher also compared mean GPA between the two groups one year later. An

independent samples *t*-test was utilized to determine whether there were any

statistically significant differences in the mean change in the GPA between the control

group and the treatment group from Fall Semester 2011 to Fall Semester 2012. The

results showed that there was an average change of -1.08% for the control group and

an average change of 0.87% for the treatment group. The results of the independent

samples *t*-test show that the *p* value is .002 which is less than .05; therefore, the null

hypothesis is rejected. Consequently, there is a statistically significant difference in

the control group and the treatment group. This finding is an indication that

mentoring can affect academic success for the long term as well as the short term.

Research question 2.

Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore students?

The results showed that there was an average change of -19.9 for the control group and an average change of -20.52 for the treatment group. The results of the independent samples *t*-test show that the *p* value is .968 which is greater than .05; therefore, the null hypothesis is accepted. There was no statistically significant difference in the control group and the treatment group.

This finding does not indicate that mentoring was helpful in improving the participant's commitment to being a student. However, it should be noted that there was a significant change in the risk of not persisting for each group. Both groups improved significantly in this category; however, only students who persisted would have been available to receive and complete the survey. If the researcher had been able to contact and administer surveys to students who did not persist, the results may have been different.

Because the survey was only given to students that were still enrolled in the university then results may not be representative of the effectiveness of mentoring on the student role commitment of the participants. The students that completed the survey were still enrolled at the time the survey was administered. This could be because students that persist may have a higher overall student role commitment then those that didn't. It may be beneficial to survey students that did not persist to explore whether those in the treatment group and control grouped differed in their student role commitment.

The students that persisted in both groups may show similar student role

commitment because of external factors not related to the mentoring. Surveying

those that did not persist may show similar levels of student role commitment that

would indicate that this is not a factor that is affected by mentoring. Surveying non

persisting students may also show that mentoring did improve student role

commitment but not enough to mitigate outside factors.

Research question 3.

Does participation in an academic mentor program affect the "academic skills

confidence," as defined by the *TCI*, of sophomore students?

The results showed that there was an average change of -11.6 for the control

group and an average change of -12.72 for the treatment group. The results of the

independent samples *t*-test show that the *p* value is .708 which is greater than .05;

therefore, the null hypothesis is accepted. There was no statistically significant

difference in the control group and the treatment group.

This finding also does not indicate that mentoring was helpful in improving the

participant's academic skills confidence. It should be noted that there was a

significant change in the risk of not persisting for each group. Both groups dropped

significantly in this category; however, only those students who persisted would have

been available to receive and complete the survey. If the researcher had been able to

contact and administer surveys to students who did not persist, then the results may

have varied. Because the survey was only given to students that were still enrolled in the

university then results may not be representative of the effectiveness of mentoring on

academic skills confidence of the participants. The students that completed the survey

were still enrolled. It may be beneficial to survey students that did not persist to whether those in the treatment group and control grouped differed in their academic confidence. The students that persisted in both groups may show similar academic confidence because of external factors not related to the mentoring. It would be know if the academic skills comfort level improved with participants that did not This could lead to new avenues of research to determine the other reasons that they not persist and explore possible ways of mitigating those factors.

Research question 4.

Does participation in an academic mentor program affect the persistence of students from sophomore to junior standing?

The results showed that the control group had a retention rate of 81.1% from Fall Semester 2011 to Fall Semester 2012, and the treatment group had a retention rate of 76.3% from Fall Semester 2011 to Fall Semester 2012. The results of the Chi Square showed that the p value is .148 which is greater than .05; therefore, the null hypothesis is accepted. There was no statistically significant difference in the control and treatment groups.

Both the control group and the treatment group had similar retention rates, but the effect on whether students would persist to graduation is not clear. Students may have transferred to another institution and completed a degree at that institution. The study did not examine the effect on students' loyal to the institution. Students may have stopped out for reasons that do not apply to the constraints of this research study. The treatment group, while not significant, did demonstrate a lower persistence rate than the control group.

The similar persistence rates of the treatment and the control group indicates that the persistence at that university is not strongly tied to academic performance. The treatment group had a significantly higher grade point average then the control group after a year. The control group and the treatment group had similar persistence rates from sophomore to junior year. This would seem to indicate that persistence is being affected by another factor other than academic performance. Future research should include exploring the factors that contribute to a student not persisting. Academic performance does not matter if the student does not persist to graduation.

Discussion and conclusions.

Overall, the study's findings indicate that mentoring had a significant impact on the academic success of sophomore students from a GPA perspective. The GPA of the treatment group was significantly higher than the control group after one semester and still significantly higher after one year. The non-cognitive factors did not seem to be impacted in a significant way. One argument could be that there are other factors which would better explain the increase in GPA but not in student role commitment or academic skills comfort. Research in social psychology suggests that isolated, relatively short interventions targeting non cognitive factors such as sense of belonging in a college setting can produce significant and lasting effects (Yeager & Walton 2011). While there was not a significant difference in the treatment and control group with regard to the non-cognitive factors, there were significant increases in both the control group and the treatment group in their student role commitment and skills comfort. The respondents were all students who had persisted, and, therefore, have adapted in some way -- either through the mentoring program or through some

mechanism. It would be informative if the study could have included students who

not persisted in both the treatment group as well as the control group. The inclusion

the study of students that did not persist would allow exploration of other factors that

might have a greater impact on the persistence of sophomore students.

Overall, there was not a significant difference in the persistence rates of the

control group and the treatment group. There may be factors other than academic

performance which impacted persistence at this institution. The mentor program may

have taught students in treatment group the study skills and the academic skills to

prepare for class better than the control group, but the mentor program may not have

done a good job of connecting them to the institution. The mentor program may be

more effective overall if it included strategies for connecting students to the university

as well as preparing them to perform academically. The psycho social aspect may play

a greater role in persistence then academic performance. According to Vuong, Brown-

Welty, Tracz (2010) Students who have strong social connections that support their

academic and emotional development are more likely to finish their degree. This

would indicate a need to add a social connection and support piece to the mentor

program. The addition of the social support component could coupled with the

academic mentor program could produce a better persistence rate for sophomore

students. According to McKenzie and Schweitzer (2001) predictors of student

persistence and graduation are typically divided into academic and non-academic. The

last group may be further subdivided into psychosocial, cognitive and demographic

predictors. study does not indicate that academic performance is a significant factor in

the persistence of sophomore students. This would suggest that other factors may

greater role in persistence. One of those possible factors is the financial burden of

for college. A study by the Delta Cost Project (2012) found that inadequate financial

resources is one of the principal reasons students do not finish college. Inadequate

money is the second most reported reason for students leaving college. Other reasons

dropping out may be indirectly related to lack of money. One example noted in the

report was, students who report that they are not continuing due to family

could be referring to not enough resources to pay for a child's daycare.

According to Goomas (2014), improving the academic success of college

students remains a daunting task for student affairs professionals, academic faculty,

and policy makers. The results of this research could have an impact on the types of

student success initiatives that colleges and university implement. An initiative that

shows positive effects in student academic success one year after participation in the

program could be a very valuable and cost effective student success program.

Academic mentoring appears to teach academic success strategies that last beyond

the semester in which the mentoring takes place and seem to be transferable to

subsequent semesters. The research suggests that administrators seriously consider

implementing academic mentor programs to improve student academic success. The

longevity of the results suggests that it is an effective and cost effective way to

improveAnother factor to consider would be the types of students that attend the

university. The institution has a large military affiliated population that could

contribute to the lower persistence rate. Students that are deployed or whose families

are deployed to other locations may have a greater tendency to transfer. This is a

factor that would have nothing to do with academic performance.

Limitations of the study.

The limitations of the study result from several factors. The first limitation is associated with the study's focus on only one institution as well as the utilization of only one year of data in the analysis. The second limitation is that the study was targeted at sophomores only, which reduces the generalizability of the findings to other types of students. Further, the study was also limited by the size of the treatment group as compared to the size of the control group. The survey respondents were limited to students who were still enrolled at the institution which impacted the findings because those students who did not persist could not be contacted. Therefore, useful data regarding non-cognitive factors of those who did not persist could not be assessed and included with that of those students who persisted. The inclusion of the non-persisting students may have yielded rich data which may have demonstrated a significant difference between the control group and the treatment group. The low response rate was a particularly concerning limitation of the study. The researcher

Implications and recommendations for policy and practice.

Implications and recommendations for practice based on data obtained from this study are many. The results of the study indicate that an academic mentor program does help academic performance. The results also indicated that the mentoring had a lasting effect beyond the semester in which the mentoring took place. Based on the conclusions resulting from the data analysis, the researcher made several Academiersliiltiomaching or mentoring from a peer should be utilized with students who have a high risk of not persisting for academic reasons. This is because the results show a significant difference in GPA between the control group

the treatment group. The group that was mentored performed significantly better academically then the group that was not mentored. These results were still after one year. This could be an effective way to increase the persistence of students struggle academically.

The researcher recommends that mentoring should not focus solely on academic coaching and mentoring, but that it should also include elements designed to help the student connect with the campus community as well as the institution. The analysis showed that academic performance for the treatment group was significantly higher one year after the mentoring then it was for the control group. Therefore it is recommended that the mentoring intervention be introduced as early as possible with students that are at risk for struggling academically. Because the persistence rates of the two groups were not significantly different it would indicate that other factors play a role in persistence beyond academic success. The recommendation to add elements to the mentoring to increase the student's connection to the campus community and the university may be one way to enhance the persistence of these studentShe rate of student role commitment and academic skills comfort were higher for the treatment group then for the control group but not statically significant. This could be because the only students that received the survey were those that had persisted and were still enrolled. Including the students that did not persist may have yielded different results. Those that persisted may have developed their own student role commitment and academic skill comfort through other avenues. Looking at those that did not persist to see if mentoring helped their student role commitment or their academic skills comfort level may indicate that these are not a good measure of students persisting.

Recommendations for further research.

This study focused on the effects of mentoring on the academic performance of college sophomores. The researcher recommends expanding this type of mentoring to all students, particularly freshmen, as the results could be more pronounced when utilized with students earlier. Students that have trouble academically may be more likely to persist if they are helped earlier. One reason that differences in the persistence rates between the control group and the treatment group may not have been statistically significant, may be that students were reached too late to help them to improve enough to affect persistence.

The study should be expanded to include groups of other institutions that are similar in size and mission. Further similar research should not be limited to only one higher education institution. This expansion would speak to the generalizability of the study as well as the observations across institution. Another recommendation would be to expand the scope of the research on sophomore success programs and study what other institutions are doing for sophomore success initiatives and the results that they are receiving from those programs. Research that looks at the commonalities among successful sophomore success programs could provide rich data that could be used by a variety of institutions.

The study should also attempt to include students who did not persist in either the control group or treatment group to determine any if any significant difference exists between them.

This study would also benefit from the addition of the campus community and institutional connection to the academic preparation to determine whether there was

significant effect on the persistence rate of students. Adding community building into the academic mentor program could result in a greater rate of persistence for the participants that receive the mentoring. This would incorporate not only academic but also the psycho-social needs of the student to create more effective student program.

Summary

This dissertation was presented in five chapters using a quantitative research design. The first chapter presented an overview of the study, the background, and the problem. College sophomores receive minimal attention in higher education literature, and researchers have suggested that sophomores frequently face academic difficulties (Gaunke & Woosley, 2005). According to Pattengale and Schriener (2000), a student's second year of college may be the period of time in which the student disengages from academic life resulting in a negative impact on their grades and degree progress.

During a time when higher education institutions are scrutinized and asked to justify the expensive cost of a college degree, poor graduation and retention rates are a major issue facing colleges and universities in the United States. According to Clark and Parette (2002), while a significant amount of knowledge exists in educational disciplines regarding the characteristics and needs of students in the first year, comparatively little information exists regarding approaches for assisting students in the second year of higher education. Campbell and Campbell (2007) intimated that more research concentrating on the outcomes of mentor programs is needed. Specifically, research that evaluates academic mentor programs and their effect on sophomore student academic success is needed.

Chapter two detailed the plan of study and the methodology. Academic performance was assessed by analyzing cumulative GPA data after Fall Semester 2011 and Fall Semester 2012. The average change in the mentor program participants' (the treatment group) cumulative GPAs from fall semester to spring semester were compared to the average change in the non-mentor program participants' (the control group) cumulative GPAs from fall semester to spring semester. This assessment was completed at the end of Fall Semester 2011 and Fall Semester 2012 semester.

The TCI factors, "Student Role Commitment" and "Academic Skills Confidence," from the treatment group and the control group were compared and analyzed to study non-cognitive factors effecting student success. A t-test for independent samples was employed to determine if there was a statistically significant difference in the scores of the control group and the treatment group on the "Academic Skills Confidence" scale of the TCI.

The retention rate of students from Fall Semester 2011 and Fall Semester 2012 for the treatment group and the control group were compared and analyzed to determine if there was an effect on the retention of students. A Chi-square test for independence was employed to determine if there was a statistically significant association in the control group and the treatment group and in the persistence from sophomore status to junior status after participation in the program.

The findings of the study highlighted the need for future research. This was an exploratory research study. The findings indicate that mentoring can have a impact on student academic success which can lead to higher grades. The study also highlighted the need to replicate the study at other higher education institutions and

adjust for students who are no longer enrolled. It is important to add those responses these data for a clearer understanding of the results. It is also important to add community and institutional connectedness to the study so as to determine if these would help to improve retention and graduation rates. It would also be interesting to longitudinal study to follow students for their college career. In particular, it would be beneficial to determine whether these adjustments would impact the four-year and year graduation rates. Finally, this study highlighted directions for continued research and also suggested actions that might be taken to increase student academic success higher education institutions.

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Appendices

Appendix A: Academic Mentor Survey

Deciding to Attend College

The purpose of this section is to determine the reasons you chose to attend college after high school. Using the following scale, please indicate how important each of the following reasons was in your decision to go to college.

<u>A</u>. Very Important   <u>B</u>. Somewhat Important   <u>C</u>. Not Important

---

1. To be able to get a better job

2. To broaden my perspectives

3. To get away from home

4. To be able to make more money

5. To learn more about things which interest me

6. To attain feelings of accomplishment and self-confidence

7. To develop and use my athletic skills

8. To prepare myself for graduate or professional school

9. To participate in college social life

10. To develop interpersonal skills

Now, please indicate how frequently you had each of the following experiences during your LAST SEMESTER in College according to the following scale.

<u>A</u>. Frequently   <u>B</u>. Occasionally   <u>C</u>. Never

---

11. Failed to complete a homework assignment on time

12. Drank alcoholic beverages

13. Had difficulty concentrating on assignments

14. Made careless mistakes on tests

15. Felt overwhelmed by all I had to do

16. Was too bored to study

17. Felt depressed

Abilities and Traits

In this section, we are interested in learning more about how you would rate yourself on various abilities and traits. Please rate yourself on each of the following abilities or traits compared to the average person your age according to the following scale.

A. Top 10%   **B.** Above Average   **C.** Average   **D.** Below Average   **E.** Lowest

Academic Abilities and Traits

18. General academic ability

19. Mathematical ability

20. Reading comprehension

21. Study skills

22. Time management skills

23. Writing ability

24. Computer skills

Other Abilities and Traits

25. Drive to achieve

26. Popularity with the opposite sex

27. Popularity with the same sex

28. Leadership ability

29. Physical health

30. Self confidence

31. Interpersonal communication skills

Attitudes About Being a College Student

Please rate the extent to which you agree with each of the following statements about being a college student.

A. Strongly Agree	**D**. Slightly Disagree
B. Moderately Agree	**E**. Moderately Disagree
C. Slightly Agree	**F**. Strongly Disagree

32. It is important to me to be a good student

33. I expect to work hard at studying in college

34. I am committed to being an active participant in my college studies

35. I will be proud to do well academically in college

36. I want others to see me as an effective student in college

37. I admire people who are good students

38. I find learning to be fulfilling

39. I will allow sufficient time for studying in college

40. I see myself continuing my education in some way throughout my entire life

41. I feel really motivated to be successful in my college career

42. I don't seem to get going on anything important

43. I don't seem to have the drive to get my work done

How great are the chances that the following situations will happen to you?

<u>A</u>. Very Good Chance	<u>B</u>. Some Chance	<u>C</u>. No Chance

44. Graduate with honors

45. Miss more than one class per week

46. Develop a good relationship with at least one faculty member or an advisor

47. Earn at least a "B" average

48. Study with other students

49. Fail one or more courses

50. Find my courses boring

51. Receive emotional support from my family if I experience problems in college

52. Complete a bachelor's degree at this college.

53. If needed, seek assistance for personal, career, or academic problems from the appropriate office on campus

54. Be placed on academic probation

55. Drop out of college temporarily

56. Drop out of college permanently

57. Transfer to another college at the end of my freshman year

58. Transfer to another college sometime in the future

59. Return for the fall semester of my sophomore year

60. Be satisfied with this college.

61. Have serious disagreements with my family regarding my personal, social, academic, or career decisions

62. Feel overwhelmed occasionally by all I have to do

Appendix B: Survey Letter

Dear Student

XXX University is always seeking new ways to help our students succeed. You will be asked to complete a survey. The purpose of the *Academic Mentoring Survey* is to study the effect of mentoring on student's academic success. All information on the *Academic Mentoring Survey* will be held in the strictest confidence on secure computers with password protection. Only data on students as a group will be reported. By completing the survey you are agreeing to participate in the study.

Completing the *Academic Mentoring Survey* should take you **only about 5 minutes** and doing so will make you eligible for up to **3 drawings for ODU Bookstore Gift Cards.** Participation in this study is voluntary and participants may withdraw at any time.

Please click on the following link and complete the *Academic Mentoring Survey* now. [SURVEY LINK]

If you have any questions please contact me at jclee@odu.edu.

Thank you

John Lee

Appendix C: Sample Reminder Email

(FirstName}

XXX University is always seeking new ways to help our students succeed. You will be asked to complete a survey. The purpose of the *Academic Mentoring Survey* is to study the effect of mentoring on student's academic success. All information on the *Academic Mentoring Survey* will be held in the strictest confidence on secure computers with password protection. Only data on students as a group will be reported. By completing the survey you are agreeing to participate in the study.

Completing the *Academic Mentoring Survey* should take you **only about 5 minutes** and doing so will make you eligible for up to **3 drawings for ODU Bookstore Gift Cards.** Participation in this study is voluntary and participants may withdraw at any time. Please click on the following link and complete the *Academic Mentoring Survey* now.

If you have any questions please contact me at jclee@odu.edu.

Thank you

John Lee

Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Appendix D: Proposal to the Institution's College Human Subjects Committee

OLD DOMINION UNIVERSITY

APPLICATION FOR EXEMPT RESEARCH

Note: For research projects regulated by or supported by the Federal Government, submit 10 copies of this application to the Institutional Review Board. Otherwise, submit to your college human subjects committee.

Responsible Project Investigator (RPI)		
The RPI must be a member of ODU faculty or staff who will serve as the project supervisor and be held accountable for all aspects of the project. Students cannot be listed as RPIs.		
First Name: Dennis	Middle Initial: E	Last Name: Gregory
Telephone:(757) 683-3702	Fax Number:	E-mail: dgregory@odu.edu
Office Address: Darden College of Education Office #168-6		
City: Norfolk	State: VA	Zip: 23529
Department: Educational Foundations and Leadership	College: Darden College of Education	
Complete Title of Research Project: The Effects of Mentoring on the Academic Success of Sophomores at a Large Public Research Institution	Code Name (One word): Gregory_mentoring	
Investigators		
Individuals who are directly responsible for any of the following: the project's design, implementation, consent process, data collection, and data analysis. If more investigators exist than lines provided, please attach a separate list.		

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First Name: John	Middle Initial: C	Last Name: Lee
Telephone: 757-683-5347	Fax Number:757-683-4780	Email: jleex052@odu.edu
Office Address: Student Success Center 1104B		
City: Norfolk	State:VA	Zip:23529
Affiliation: __Faculty _X_Graduate Student __ Undergraduate Student __Staff __Other_____		
First Name:	Middle Initial:	Last Name:
Telephone:	Fax Number:	Email:
Office Address:		
City:	State:	Zip:
Affiliation: __Faculty __Graduate Student __ Undergraduate Student __Staff __Other_____		
List additional investigators on attachment and check here: __		

Type of Research

1. **This study is being conduced as part of (check all that apply):**

_	Faculty Research	_	Non-Thesis Graduate Student Research
X	Doctoral Dissertation	_	Honors or Individual Problems Project
_	Masters Thesis	_	Other_____

Funding

2. Is this research project externally funded or contracted for by an agency or institution which is independent of the university? Remember, if the project receives ANY federal support, then the project CANNOT be reviewed by a College Committee and MUST be reviewed by the University's Institutional Review Board (IRB).

___Yes (If yes, indicate the granting or contracting agency and provide identifying information.)
_X__No

Agency Name:

Mailing Address:

Point of Contact:

Telephone:

Research Dates

3a. Date you wish to start research (MM/DD/YY)   __05_/_31__/_2013__

3b. Date you wish to end research (MM/DD/YY)   __05_/_30__/_2014__

NOTE: Exempt projects do not have expiration dates and do not require submission of a Progress Report after 1 year.

Human Subjects Review

4. Has this project been reviewed by any other committee (university, governmental, private

sector) for the protection of human research participants?

___Yes
_X__No

4a. If yes, is ODU conducting the primary review?

__Yes
_X_No (If no go to 4b)

4b. Who is conducting the primary review?

5. Attach a description of the following items:

_X_Description of the Proposed Study
_X_Research Protocol
_X_References
_X_Any Letters, Flyers, Questionnaires, etc. which will be distributed to the study subjects or other study participants
__If the research is part of a research proposal submitted for federal, state or external funding,

submit a copy of the   FULL proposal

Note: The description should be in sufficient detail to allow the Human Subjects Review Committee

to determine if the study can be classified as EXEMPT under Federal Regulations 45CFR46.101(b).

Exemption categories

6.   **Identify which of the 6 federal exemption categories below applies to your research proposal and explain**

why the proposed research meets the category. Federal law 45 CFR 46.101(b) identifies the

following EXEMPT categories. Check all that apply and provide comments.

SPECIAL NOTE: The exemptions at 45 CFR 46.101(b) do not apply to research involving prisoners, fetuses, pregnant women, or human in vitro fertilization. The exemption at 45 CFR 46.101(b)(2), for research involving survey or interview procedures or observation of public behavior, does not apply to research with children, except for research involving observations of public behavior when the investigator(s) do not participate in the activities being observed.

____(6.1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
Comments:

Data that have been collected previously by the Office of Institutional Research and Assessment (IRA) at ODU and compiled by an IRA staff member and survey data collected by the researcher will be used for this study. The final dataset the researcher will be working with will not have identifying information that could be used to link to the subjects, all student names and UIN's will be stripped from the final dataset; therefore, the subjects, their responses to the *survey*, first semester college academic performance, and retention will remain confidential. Data will only be viewed by the researcher and the IRA staff member who compiles the data. Findings from the data will only be reported in aggregate form. Data will be housed on IRA's University-secured server. After data analyses and interpretation, the data will be deleted from IRA's secured server and destroyed by the researcher no later than July 1st, 2014.

__X__(6.2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; AND (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.
Comments:

____(6.3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if:
(i) The human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
Comments:

__X__(6.4) Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
Comments:

____ (6.5) Does not apply to the university setting; do not use it

_____(6.6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Comments:

Human Subjects Training

7.   All investigators (including graduate students enrolled in Thesis and Dissertation projects involving

human subjects) must document completion of the CITI Human Subject Protection course.

(Attach a copy of all CITI Human Subject Protection completion certificates.)

Date RPI completed Human Subject Protection training:_____

PLEASE NOTE:

1. **You may begin research when the College Committee or Institutional Review Board gives notice of its approval.**

2. **You MUST inform the College Committee or Institutional Review Board of ANY changes in method or procedure that may conceivably alter the exempt status of the project.**

Responsible Project Investigator (Must be original signature)**Date**

<u>Description of Proposed Study:</u>

Purpose of the study is to evaluate the results of a sophomore mentor program at a large public research institution. The evaluation will use both cognitive and non-cognitive measures. Rodger and Tremblay (2003) commented on the dearth of literature which indicates that mentoring is an effective tool for increasing the academic success of undergraduate students. The results of a study conducted by the National Resource Center for First-Year Experience & Students in Transition at the University of South Carolina examining the effectiveness of sophomore year initiatives indicated that mentoring was frequently used at large institutions, few institutions could provide data showing that mentoring influenced the academic success or retention of sophomores (Keup, Gahagan, & Goodwin, 2010).

Research questions:

1. Does participation in an academic mentor program improve academic performance of sophomore students, as defined by cumulative GPA?

2. Does participation in an academic mentor program affect the "student role commitment," as defined by the *TCI*, of sophomore students?

3. Does participation in an academic mentor program affect the "academic skills confidence," as defined by the *TCI*, of sophomore students?

4. Does participation in an academic mentor program affect the persistence of students from sophomore to junior standing?

Study procedures:

The researcher will collect *post hoc* data from Institutional Research and Assessment and pair it with responses from a survey. The survey will be sent to 800

students that were offered the academic mentor program in the fall semester of 2011 were sophomores. The students that chose to participate in the academic mentor will be considered the treatment group and the students that chose not to participate academic mentor program will be considered the control group. Academic will be assessed by reviewing cumulative GPA data of students before and after the 2011 Semester and after the Fall 2012 Semester.

The survey employed will use the Student Role Commitment and the Personal/Academic Confidence scales from the Transition to College Inventory (TCI). Additional data to be compiled by an IRA staff member will include the following: student retention rates from Fall 2011 to Fall 2012 and college academic performance during Fall 2011 and the 2011-2012 academic year and demographics. All data will be compiled by an institutional research staff member so the researcher has one dataset with multiple variables. Data will be housed on a university-secured server, accessible only to institutional research staff members and the researcher. Data will be viewed by only the researcher and the IRA staff member who compiles these data.

Findings from these data will be reported in aggregate form. After analyses, will be deleted from IRA's secured server and destroyed by the researcher no later July 1st, 2014. The survey will include an informed consent component that will state that by completing the survey they are agreeing to participate in the study. The will be informed that participation is completely voluntary and that they do not have participate in any way. Because institutional research will remove identifying data the researcher will never know who responds to the survey and who does not. All data be collected by Institutional research and stored on the university's secure servers.

There are no potential risks for participants. There are no potential benefits to the participant.

References

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