

ABSTRACT

THE RELATIONSHIP BETWEEN PARTICIPATION IN A STUDENT SUCCESS
COURSE AND THE RETENTION RATE AND ACADEMIC SUCCESS OF
FIRST-YEAR FRESHMEN AT A HISTORICALLY
BLACK UNIVERSITY

by

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

College of Education and International Services

School of Leadership

Title: THE RELATIONSHIP BETWEEN PARTICIPATION IN A STUDENT SUCCESS COURSE AND THE RETENTION RATE AND ACADEMIC SUCCESS OF FIRST-YEAR FRESHMEN AT A HISTORICALLY BLACK UNIVERSITY

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Date completed: March 27, 2024

Problem

Amongst the highest at-risk student populations are minority students (students of color), first-generation college students, students from low-socioeconomic status, students experiencing financial challenges, and those who enter college academically underprepared. Furthermore, studies have found a significant gap in the educational achievement of African Americans in comparison to other peer groups.

Closing this achievement gap requires educators to take a closer look at the complex concept of student retention and understand the variables and factors associated with students' successful outcomes from both an individual and institutional perspective.

An in-depth examination of the effectiveness of strategies specifically designed for the retention and academic success of at-risk students is needed to help improve student outcomes.

Method

This was a quantitative ex post facto study that used a chi-square test of independence, regression analyses, and descriptive statistics to address the research questions. This design is characterized by a non-experimental study that sought to examine the relationship between participation in an academic success course and the retention and academic success of first-year students at a Historically Black University. Data were collected from existing student data on 1,464 first-year students enrolled in the academic success course across the Fall 2019, Fall 2020, and Fall 2021 semesters. Purposive sampling was used to identify students on academic probation who successfully completed the required student success course in the subsequent Spring 2020, Spring 2021, and Spring 2022 terms, respectively, and achieved a 2.0 GPA or higher for their second term GPA. This resulted in a sample size of 176 students who met these criteria and were invited to complete the survey, of which 44 students responded.

Results

Results from the study indicated there were significant differences in the first-year retention rate and academic success of students who completed the student success course (intervention group) and those who did not (control group). In addition, there was a significant difference between the first-year retention rate and change in first-year GPA of the intervention group and that of the control group when controlling for high school

GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

Completion of the student success course was the strongest predictor of retention rate and the change in first-year GPA (academic performance). Findings revealed that low socioeconomic status and high school GPA were strong predictors of both retention and change in first-year GPA amongst the variables. First-generation status also emerged as a strong predictor of retention.

Results from the study also indicated that students who completed the student success course perceived attending the required meeting with their academic advisor within their college/department as the most helpful component in improving their GPA (academic success) and returning their second year (retention).

Conclusions

Based on the interpretation of the findings of this study, it can be concluded that a statistically significant relationship exists between completing a student success course and the academic success (improved academic performance based on GPA) and retention of first-year students at a public Historically Black University.

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A Dissertation

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by

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May 2024

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CHAPTER 1

INTRODUCTION

Background

With increased higher education costs (National Center for Education Statistics, 2019), and national student debt at an all-time high (Hanson, 2021; Lobosco, 2017), parents, students, and the United States Department of Education have taken a vested interest in ensuring college access, affordability, student retention, and degree completion (Hanover Research, 2014; U.S. Department of Education, n.d.). Accountability measures have been instituted by colleges and universities, as well as accrediting bodies and the federal government, with special emphasis on student retention and graduation rates as key indicators of institutional performance and institutional effectiveness (Alzen et al., 2021; Barclay, 2018; Millea et al., 2018).

Early student retention research, based on Tinto's (1975, 1993) Model of Institutional Departure, points to the importance of retention and its correlation to increased graduation rates (Barclay et al., 2018). Additionally, researchers have emphasized the importance of students' first year, noting students' academic performance and social and academic integration during this time as indicators of student retention and academic success (Cabrera et al., 2013; Hanover Research, 2014; Engle & Tinto, 2008; Guarneri & Connolly, 2019; Tinto, 1993; Williams et al., 2018). Therefore, it is critical to

better understand these indicators within individual institutional contexts to help inform current retention strategies and help improve student outcomes.

Students who are able to integrate into the institution socially and academically are more likely to be retained past their first year, increasing the likelihood they will persist and graduate (Engle & Tinto, 2008; Flynn, 2014; Hanover Research, 2014; Tinto, 1993, 2010). In the United States, the undergraduate dropout rate is 40%, with 30% of the dropout rate accounted for by first-year students (Hanson, 2021). Moreover, according to the Thurgood Marshall College Fund (2019), Historically Black Colleges and Universities experience higher dropout rates in comparison to all other four-year schools—with graduation rates of 34% or lower, translating to a 66% drop out rate. This retention challenge can have several long-term negative impacts—mainly on the financial stability of the individual student, institution, and national economy (Barclay et al., 2018; College Possible, 2018; Hanover Research, 2014; Kognito, 2015).

In the United States, obtaining a college degree is directly linked to higher earning potential. As Tamborini et al. (2015) posited, “. . . the lifetime earnings premium of a bachelor’s degree compared with a high school diploma is approximately 43% for men and 51% for women” (p. 1402) in the United States, with “the net return of higher education being far greater than the cost” (p.1403). In addition to the financial benefits of obtaining a college degree, a myriad of other intangible benefits include better health, longer life expectancy, and societal benefits (Tamborini et al., 2015; Trostel, 2015; Blagg & Blom, 2014; Greenstone et al., 2014; Soria et al., 2014). These findings provide context on the importance of obtaining a college degree in the United States (Roble, 2017).

Statement of the Problem

Amongst the highest at-risk student populations are minority students, first-generation college students, students from low-socioeconomic status, students experiencing financial challenges, and those who enter college academically underprepared (Brookover et al, 2021; Horton, 2015; Roble, 2017; Soria et al., 2014; Tierney & Duncheon, 2015). Within this vast array of students, financial pressure accounts for 38% of college dropouts; in addition, African American students have the highest dropout rate at 54% (Hanson, 2021). Furthermore, studies have found a significant gap in the educational achievement of African Americans in comparison to other peer groups (Banks & Dohy, 2019; College Possible, 2018; Flynn, 2014). Wittrup et al. (2016) and Kezar et al. (2020) also noted that in the United States, African American students face more challenges in pursuit of academic achievement than their White peers. These challenges include socioeconomic disadvantages, low-income, and academic under preparedness (Brookover et al., 2021; Brower et al., 2021; Hughes et al., 2012; Tierney & Duncheon, 2015).

Similarly, Flynn (2014) noted African American and Hispanic students are at higher risk of attrition due to academic under preparedness, poor attendance, inadequate study skills, and poor academic performance. In addition, Wittrup and colleagues posited that on average, African American student performance results in poorer academic achievement and graduation rates when compared to their White peers. Moreover, Hanson (2021) noted that the total completion rate of African American students who started at a 4-year public institution was 45.91%, which is significantly lower than Asian students (71.71% completion rate), White students (67.17% completion rate), and

Hispanic students (54.95% completion rate). Furthermore, according to Bryant (2024), Black students who attended HBCUs have a 32% six-year graduation rate compared to an approximate 44% six-year graduation rate from non-HBCUs.

Closing this achievement gap requires educators to take a closer look at the complex concept of student retention and understand the variables and factors associated with students' successful outcomes from both an individual and institutional perspective (Beasley et al., 2020; Tinto, 1993; Xu, 2017). An in-depth examination of the effectiveness of strategies specifically designed for the retention and academic success of at-risk students is needed to help improve student outcomes. Therefore, the problem addressed in this research is that the relationship between a student success course and the retention and academic success of first-year students at a public Historically Black University is not known.

Purpose of the Study

The purpose of this study was to examine the relationship between a student success course and the retention and academic success of first-year students at a public Historically Black University. This SCS:099—Strategies for Academic Success Course is “designed to equip probationary students with essential tools to promote improvement in their academic performance” (Lee, 2021, p. 2). Students enrolled in the course have been placed on academic probation (due to having earned less than a 2.0 cumulative GPA in their first term and are required to complete five main requirements to pass the course. The five components of the SCS:099—Strategies for Academic Success Course are (1) completion of a series of modules focused on student success, (2) attending a meeting with an academic advisor/coach within the student's academic college, (3) attending two

student success webinars facilitated by the Center for Academic Excellence at NC A&T State University, (4) completion of a career assessment, and (5) completion of a student success profile.

The SCS099: Strategies for Academic Success Course is offered through the University's Center for Academic Excellence, which includes a variety of student success and academic resources such as tutorial services, college success courses, academic recovery services, mentoring programs, and academic advising and coaching centered on early intervention and retention. Although the SCS099: Strategies for Academic Success Course has been designed to help improve students' retention and academic success, it has not been assessed for its effectiveness in these areas. Findings from this study can help guide current and future research on the assessment of strategies designed and implemented to improve retention and academic success outcomes for students.

Research Questions

The research questions guiding this study are:

1. Is there a difference between the retention rate of the intervention group and that of the control group?
2. Is there a difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group?
3. Are there differences between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
4. Are there differences between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group

when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?

5. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their academic success (improved GPA)?
6. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their retention?

Rationale

Ongoing research on the various factors impacting student retention may better inform and reframe student success strategies and early intervention efforts, which may increase student academic performance and their integration into the institution. Positive academic outcomes coupled with institutional integration (student engagement within the college setting) may help drive positive student retention and six-year completion rates (Shoulders et al., 2020; Tinto, 1993). Acquiring an understanding of variables significantly associated with student retention can help in the assessment of the effectiveness of existing strategies believed to promote student retention at Historically Black Colleges & Universities (HBCUs).

The results yielded from this study can also assist in the development of new intervention strategies and efforts specifically designed for the retention of students at HBCUs. These efforts can be geared toward supporting the factors having the most impact on student retention and academic success. Increased student retention past the first year can help increase the likelihood of long-term persistence and retention, and ultimate degree completion for the same students. This will help students meet their

academic and career goals, as well as provide them with the necessary tools to obtain gainful employment upon completing their degrees. From an institutional standpoint, increased student retention helps ensure the financial stability and reputation of said institution (Altbach et al., 2016; Hanover Research, 2014, Kognito, 2015). Furthermore, this is of critical importance given the increased use of third-party academic rankings by students and their parents when considering matriculation into an institution of higher education in addition to the use of retention and graduation rates for the allocation of funds, such as performance-based funding (Altbach et al., 2016; Li, 2018; Morse, 2021).

Theoretical Framework

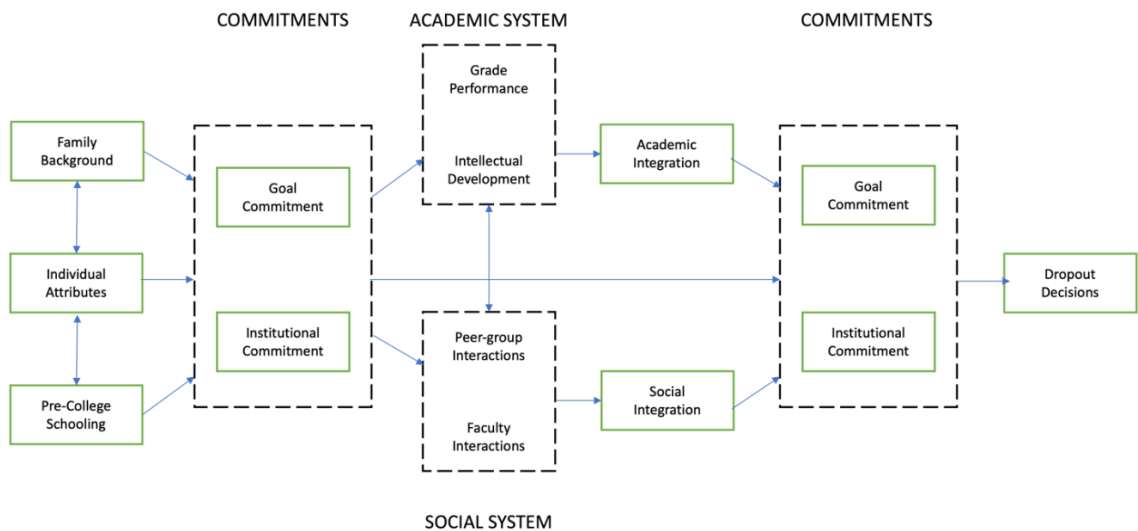
As the higher education landscape continues to evolve, so do theories pertaining to student success outcomes, such as retention. Early retention theories date back as early as 1937, during which McNeely's College Student Mortality Theory set the stage for subsequent theories on student retention. Additional retention models and theories ensued, including the study of student attributes (Summerskill, 1962), student attributes and campus environment (Spady, 1970, 1971), and academic and social integration (Tinto, 1975, 1993). As noted by Manyaga et al. (2017), ". . . two main conceptual models emerged to guide thinking about student retention and persistence: Student Attrition Models (SAM) and Student Integration Models (SIM)" (p. 33). The SAM take into consideration student experiences prior to their enrollment in college, which impact their decision to persist or drop out of college, while SIM describes academic factors such as academic performance, values, motivation, and social integration as critical to the same decision (Manyaga et al., 2017).

Among retention theories, Vincent Tinto’s SIM model (1975, 1993), has emerged as an integral model for the expansion and understanding of the retention of a diverse student body. Tinto’s (1993) model placed an emphasis on the importance of the first year of college for students, as well as minoritized student groups. In addition, Tinto (1993) proposed “Academic challenges, student-institutional fit, and failure to resolve educational and occupational goals” as the main factors associated with student departure (Manyaga et al., 2017, p. 35).

As outlined in Figure 1, Tinto’s (1993) Model of Institutional Departure states that to persist, students need integration into formal and informal academic systems (academic performance, faculty/staff interactions) and formal and informal social systems (extracurricular activities, peer-group interactions).

Figure 1

Tinto’s 1993 Model of Institutional Departure



This study focused on the ‘academic system’ component of Tinto’s (1993) Model of Institutional Departure, as outlined in Figure 2. More specifically, this component serves as the theoretical framework from which this study was designed, given the student success course examined impacts all four areas of the academic system: grade performance, intellectual development, academic integration, and goal commitment. The course description of the student success course being examined states:

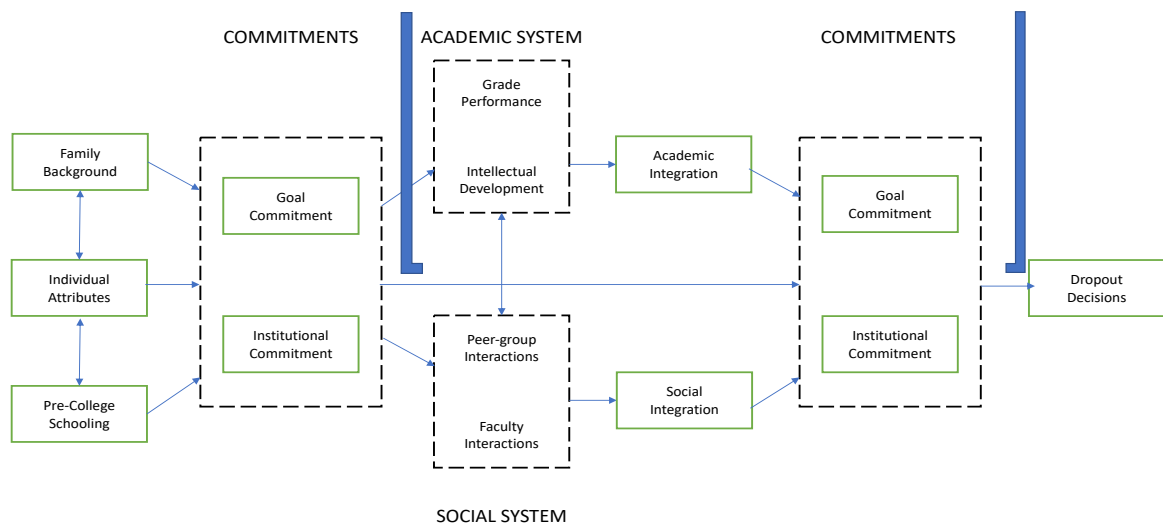
SCS 099. Strategies for Academic Success

This course will equip the probationary student with essential competencies for academic success by maximizing the students' potential to become independent thinkers and successful learners. The topic will focus on time management, utilization of university resources, developing quality study practices, balancing academic and social activities, adjusting to the university environment, and taking personal responsibility for their academic success. (Undergraduate Bulletin of North Carolina Agricultural and Technical State University, 2021, p. 445)

The four areas of the ‘academic system’ component of Tinto’s (1993) Model of Institutional Departure are captured by this course. Grade performance is a key indicator of academic success; maximizing the students’ potential to become independent thinkers and successful learners is a critical component of intellectual development; focus on the utilization of university resources, developing quality study practices, and adjusting to the university environment are all aspects of academic integration; and taking personal responsibility for their academic success is an integral part of goal commitment.

Figure 2

Adaptation of Tinto’s 1993 Model of Institutional Departure, Academic Systems Focus



Significance of the Study

The significance of this study is founded on the important role the retention and academic success of students play on both individual and institutional outcomes. While no single factor or resource can be attributed to student retention and academic success, the exploration of strategies designed for the retention and academic success of at-risk students can help inform current strategies, with the intent of improving said outcomes. The relationship between the SCS:099—Strategies for Academic Success Course and the retention and academic success of at-risk students had not been examined at the public Historically Black University participating in this research study. These findings will help the institution determine if its SCS:099—Strategies for Academic Success Course needs to be reframed, based on empirical evidence. In addition, these findings will help the institution take a customized approach to further supporting at-risk first-year students by examining their satisfaction with different areas of the program and its relationship to retention and improved cumulative GPA. This study will also help inform future research

on the evaluation of retention and academic success efforts at other institutions of higher education, especially HBCUs.

Definition of Terms

In this study, frequently used terms, as well as the variables of interest, were conceptually and operationally defined as follows.

Retention rate is defined as:

The percentage of a school's first-time, first-year undergraduate students who continue at that school the next year. For example, a student who studies full-time in the fall semester and keeps on studying in the program in the next fall semester is counted in this rate (U.S. Department of Education, 2021).

The operational definition of *retention rate* is the percentage of first-time, full-time students who returned the following fall semester as second-year, full-time students.

Academic Success is defined as “academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance . . . we include academic achievement for its obvious depiction of students' academic performance and for its intended representation of academic ability” (York et al., 2015, pp. 5–6). The operational definition of *academic success* is a minimum 2.0 cumulative GPA, which is the minimum GPA requirement to improve from ‘Academic Probation’ to ‘Good Academic Standing’ at NC A&T State University.

First-time, full-time student is defined as an undergraduate student without prior postsecondary experience attending an institution of higher education and enrolled in at least 12 credits. This also includes students who earned college credits prior to graduating high school or in the summer term before their first fall term (National Center for Education Statistics, n.d.).

Student Success Course or *Strategies for Academic Success Course* is defined as a course specifically for students on academic probation to equip them with competencies for academic success (Undergraduate Bulletin of North Carolina Agricultural and Technical State University, 2021). In this study, the operational definition of *student success course* is the SCS:099—Strategies for Academic Success Course offered to students placed on academic probation at NC A&T State University.

Academic Probation is an academic standing based on poor academic performance resulting in less than a cumulative 2.0 cumulative GPA (Undergraduate Bulletin of North Carolina Agricultural and Technical State University, 2021). The operational definition of *academic probation* in this study is failure to earn a minimum 2.0 cumulative GPA.

At-risk students are defined as students who are considered to have a higher probability of failing academically or dropping out of college (The Glossary of Education Reform, 2013). The operational definition of *at-risk* students in this study are students on academic probation after having completed their first semester.

Attrition is defined as “the unit of measurement used to determine the rate of dropout of students who do not return for, or during, their first and second year of college” (Stein, 2018). The operational definition of *attrition* in this study is the rate of first-time, full-time students who failed to return for their second year.

High school GPA is defined by the cumulative grade point average achieved after having completed secondary education.

Gender is defined as a social construct or social identity a given culture associates with an individual’s biological sex (American Psychological Association, 2019). The

operational definition of gender is male or female, given there are no additional distinctions at NC A&T State University (such as ‘other’) for students who may identify differently.

Socioeconomic status (SES) is defined by the standing of an individual or group in society and is based on social and economic factors that affect access to education and other resources that are critical to an individual’s upward mobility (Dictionary.com, n.d.). The operational definition of *socioeconomic status* is twofold. Students who are recipients of the Federal Pell Grant will be classified as having *low socioeconomic status*, while those who are not Federal Pell Grant recipients will not be classified as having *low socioeconomic status*. Federal Pell Grants are offered to undergraduate students who are from low-income households (U.S. Department of Education, n.d.).

First-generation status is defined by a student whose parents did not complete a bachelor’s degree (NASPA, n.d.).

Assumptions

In this research study, it was assumed the questionnaire used to identify the satisfaction of first-year students with different areas of the course would elicit reliable and honest responses, and that the respondents would have a clear understanding of the questions they were asked. Lastly, it was assumed the participants would respond objectively to questions pertaining to their level of satisfaction related to the different areas of the course.

General Methodology

This quantitative study was an ex post facto design. This design is characterized by a non-experimental study that sought to examine the relationship between participation in a student success course (independent variable) and the retention (dependent variable 1) and academic success (dependent variable 2) of first-year students at a Historically Black University. Data were collected from existing student data housed by the Analytics Division of the Office of Strategic Planning and Institutional Effectiveness (OSPIE) on first-year students enrolled in the SCS:099—Strategies for Academic Success Course in the Spring 2020, Spring 2021, and Spring 2022 semesters, as well as an online self-administered survey designed to solicit student perceptions of the effectiveness of different requirements of the course. The data analysis was conducted using the IBM Statistical Package for Social Sciences (SPSS) version 28 for descriptive and inferential analytics.

Limitations of the Study

The limitations of this study are as follows:

1. Results may not be generalizable to all undergraduate students due to the sample being comprised solely of first-time, full-time students placed on academic probation.
2. Results may not be generalizable to racially diverse institutions of higher education due to the sample being drawn from a Historically Black University, which is comprised of a vast majority of African American students.

Delimitations of the Study

This study was limited to one type of at-risk student group— those on academic probation within their first year of matriculation. Although there are several retention and academic success strategies at the participating institution, this study focused on the relationship of one early intervention strategy— a student success course— with retention and academic success.

Summary

This chapter introduced the importance of student retention as it relates to institutional accountability measures, its impact on long-term student outcomes, and the financial implications of dropouts on both students and institutions of higher education. The current chapter introduced the problem of at-risk students in danger of never completing a degree at all—which are often minoritized student groups. Among them, African Americans demonstrate the highest rates of academic underperformance. In addition, the rationale and significance of the study were postulated—outlining the importance of examining current student retention and academic success strategies. More specifically, this study focused on one strategy, a student success course, and its relationship to student retention and academic success outcomes at an HBCU. Understanding this relationship can provide insight for institutions of higher education in their assessment of current programs, early intervention strategies, and the future direction of student retention and the academic success of African American students at HBCUs.

Outline

This study will be presented in five chapters. Chapter 1 has presented the statement of the problem, purpose of the study, research questions, rationale, and brief overview of the theoretical framework on which the study is grounded. In addition, the significance of the study, definition of terms, assumptions, limitations, and delimitations were presented. Chapter 2 presents a review of the literature as it relates to student retention and attrition, facilitators of retention, barriers to retention, the importance of student retention, student attrition for at-risk students, low socioeconomic students, first-generation college students, students experiencing financial hardships, under preparedness for college, and strategies for supporting the retention and academic success of at-risk students. Chapter 3 details the research methods, including participant selection, identification of the dependent variable and independent variables, research design, and methodology. Chapter 4 presents the results of the study. Chapter 5 presents a summary of the study's findings and recommendations for future research.

This quantitative research study will add to the extensive body of literature pertaining to student retention and academic success of first-time, full-time at-risk students at HBCUs.

CHAPTER 2

LITERATURE REVIEW

Introduction

Student attrition has posed a significant threat to individual students, institutions of higher education, and the national economy, particularly from an occupational, societal, and financial standpoint (Barclay et al., 2018; College Possible, 2018; Tinto, 1993). An extensive body of literature exists related to the critical role student retention and academic success play in relation to degree completion. The literature points to the importance of students' first-year experience and several at-risk factors associated with increased dropout rates (Collings & Eaton, 2021; Fox & Martin, 2017; Howard & Flora, 2015; Westrick et al., 2015; Williams et al., 2018). These include college under preparedness, low-socioeconomic status, and being a first-generation college student (College Possible, 2018; Hanson, 2021; Horton, 2015; Tinto, 1993; Wittrup et al., 2016). The problem addressed in this study is that the relationship between a student success course and the retention and academic success of first-year students at a Historically Black University was not known. The purpose of this research was to examine this relationship and assess the effectiveness of a student success course on improving the retention and academic success of first-year students.

This chapter provides an overview of the theoretical framework that guided this study, as well as a review of literature centered on examining and synthesizing prior research on student retention and academic success strategies to support at-risk students. The search strategies used to gather literature include Google Scholar, James White Library at Andrews University (online), and academic databases such as EBSCO Academic Search Complete, and Research Gate. The following terms were used to search for literature: *college student retention, attrition, academic success, retention strategies, first-year college students, minority college students, dropout behaviors, and at-risk college students.*

Theoretical Framework: Historical Overview

Early Retention Theories

Student departure and student retention theories have been evolving for several decades. As summarized by Manyaga et al. (2017), student retention models can be referenced back to the 1930s, during which John McNeely's College Student Mortality Theory (1937) was published and subsequent theories and models emerged. In a joint effort with the federal Office of Education, McNeely's student mortality (dropout) research included sixty universities and comparable institutions of higher education and identified several factors influencing student attrition across the U.S. These factors included poor academic performance, financial challenges, personal circumstances such as illness, familial demands, work commitments, participation in extra-curricular activities, academic load, home proximity in relation to school, and lack of interest, among others.

Following McNeely's (1937) research, another critical contributor to student retention theories was John Summerskill (1962). Summerskill conducted research on the connection between degree attainment and personality traits influenced by both internal and external factors, which included social, psychological, economic, and familial barriers. Moreover, Summerskill stressed the role self-motivation played on student attrition, further contributing to retention research focused on the student's role in their academic attainment. However, Seidman (2012) noted that Summerskill's (1962) research in and of itself was not as impactful as his contribution to the understanding of student attrition "for his recommendation that psychological and sociological theories and concepts provide the empirical framework for subsequent research in this area" (p. 67). Prior to Summerskill's (1962) recommendations, student retention research—including his own— was primarily focused on a student's role in their attrition, rather than encompassing a comprehensive approach that examined attrition factors related to both students and the institutions they attended (Tinto, 1993). Additionally, according to Noel-Levitz (2008), Summerskill (1962) can be considered a pioneer in calling for the development of national standards related to defining and measuring student retention and completion rates.

In line with Summerskill's (1962) recommendations, Spady (1970, 1971) is recognized as a seminal researcher in the development of student retention and attrition theories. He presented his revised model of the student attrition process, which he was the first to link to Emile Durkheim's Suicide Theory (1951) and the concept of social integration to student attrition (Aljohani, 2016; Tinto, 1993). Spady's approach was based on his observation of a lack of theoretical and empirical coherence as it relates to

demonstrating a relationship between attrition and various factors (Seidman, 2012). Spady's (1970, 1971) research focused primarily on the interaction between student attributes (such as dispositions and interests) and the university environment (college academics and social systems) and their role in the dropout process (Aljohani, 2016; Seidman, 2012).

Tinto's Model of Institutional Departure

Tinto (1993) noted that while the research on student dropout behavior did not lack models that sought to explain student attrition, they failed to consider the role institutions of higher education play in the process. He argued that prior attempts to explain attrition were primarily psychological models of educational persistence, which were centered on intellectual attributes and the student's ability to meet academic demands. Others, he noted, "stressed the roles personality, motivation, and disposition play in influencing the student's willingness to meet those demands" (Tinto, 1993, p. 85). He added that this approach to understanding student attrition was characterized by the reflection of an individual's choices associated with completing their degree, implying a personal failure, shortcoming, or weakness in the individual that led to their inability to meet the demands of college. Given the psychological model of educational persistence failed to include the impact of the institution on student attrition, Tinto (1993) posited that it was not a suitable model of student attrition as it relates to institutional research and policy.

Tinto (1993) further argued that while societal theories of student departure focus on the role of external forces in student persistence, they do so at the expense of encompassing institutional factors. As such, they fail to understand the variations in

student dropout behavior that arise within the institutions themselves. Given this approach, societal theories, as Tinto (1993) noted, “are much less useful in explaining the institution-specific forces that shape differing forms of institutional departure” (p. 87). Based on his examination of previous student departure theories, which included psychological models of educational persistence, societal theories, economic theories, financial theories, and organizational sociology theories, Tinto (1993) concluded that the role social settings in institutions plays in student attrition had not been thoroughly included in prior student departure theories and models. This led to his development of a new theory of institutional departure: Tinto’s (1993) Model of Institutional Departure.

Tinto’s Model of Institutional Departure (1993) was based on Emile Durkheim’s Theory of Suicide (1951), as well Arnold Van Gennep’s (1960) Rites of Passage study. Tinto highlighted Van Gennep’s concern with the movement of individuals from membership in one group to that in another and its connection to the process of student departure. This movement was characterized by three different stages, each with its own ceremonies and rituals. These rites of passage, as explained by Tinto (1993), included (1) separation from communities in the past, (2) transition between communities, and (3) incorporation into the communities of the college (Seidman, 2012). In this process of separation, transition, and incorporation, Tinto (1993) noted that adjustment challenges can arise, which can greatly influence the difference between persistence and student departure from the institution. In line with his criticisms of past student departure theories, Tinto (1993) posited, “those difficulties are not, however, solely the reflection of the individual attributes” (p. 94). They are, as Tinto (1993) further suggested, “as much a reflection of the problems inherent in shifts of community membership as they are either

of the personality of the individual or the character of the institution in which membership is sought” (p. 94). He also cautioned on the oversimplification of viewing the process as one that is linear and experienced in the same manner by all students, suggesting the ways individuals experience these stages differ significantly.

Tinto (1993) noted that by isolating the interaction of the early stages of student departure, Van Gennep’s work provided the conceptual framework to identify the three stages of separation, transition, and incorporation and their relationship with student attrition. While Tinto (1993) acknowledged Van Gennep’s contributions to the development of his theory of student departure, he also observed it did incorporate the informal processes of interaction among individuals on campus that lead to incorporation. This gap in understanding is what lead Tinto to examine the work of Emile Durkheim (1951) and his study of community and suicide as it relates to student departure.

Tinto (1993) posited that while the study of suicide also helped guide his student departure theory, “this does not imply that institutional departure necessarily leads to suicide or represents a form of suicidal behavior. But there are enough intriguing analogies between the two situations to warrant our attention” (p. 99). Instead, he proposed that Durkheim’s theory on suicide is an adaptation to the question of individual departure from institutions of higher education. Durkheim’s theory includes an in-depth exploration of four types of suicide. The first is altruistic suicide, which is defined as a morally desirable way of taking one’s life. The second is anomic suicide, which is characterized by a lack of norms. Durkheim describes this lack of norms as a disruption of normal conditions of society, for instance, war, plagues, or economic or religious uproar. Per Durkheim (1971), this lack of structure to one’s daily living increases the

likelihood of suicide. Conversely, the third is fatalistic suicide, which arises from excessive normative control, such as societies that are excessively regulated.

These three types of suicide, however, were insufficient in Durkheim's perspective, in explaining suicide rates of most societies. This insufficiency was best explained by egotistical suicide, "which arises when individuals are unable to become integrated and establish membership within the communities of society" (Tinto, 1993, p. 101). Durkheim (1951) further explained that two forms of integration were critical to establishing membership within communities: social and intellectual. Tinto (1993) sought to draw from Durkheim's research to employ a comparative study of the variation in rates of student attrition among various institutions of higher education. He argued that similar to Durkheim's approach, the analysis of differences in suicide rates between societies could be employed to examine the differences between types of departure and the roots of variation of departure among institutions.

In alignment with altruistic suicide, Tinto (1993) proposed the possibility of institutional ideologies or subcultures that could promote departure from higher education, especially those ideologies which promote the virtues of departing from higher education. Similarly, the concept of anomic suicide could be applied to the emergence of disruptions on campus which pose a threat to the daily functions of the institutions, therefore undermining the normal ties individuals develop with the institutions. Tinto (1993) noted that the riots in the 1970s, for instance, were a major disruption that resulted in high student attrition rates. Conversely, institutions with highly restrictive intellectual and behavioral norms may also experience high attrition rates, as students depart this type of institution for one that is less stringent.

While these first three types of suicide can help explain temporary or unique circumstances that may arise and contribute to institutional departure, egotistical suicide is the only one that can provide an educational parallel on the occurrence of continuing difference in patterns of departure (Tinto, 1993). Further, he posited that egotistical suicide points to the ways in which societal and intellectual communities within an institution impact students' willingness to stay enrolled. In this regard, Tinto (1993) noted that Durkheim's, as well as Van Gennep's, work provided the foundation from which we can understand the differing social and intellectual communities within a college setting, and how they influence students' persistence or dropout decisions. Together, these works form the framework from which Tinto's Model of Institutional Departure was created and revised (1975, 1993).

Tinto's (1993) Model of Institutional Departure, in turn, provides the theoretical framework on which this current study was founded. This model is best known for its incorporation of both academic and social systems, based on formal and informal interactions between students, staff, and faculty, as outlined in Figure 1 in Chapter 1. As described by Tinto (1993), the social system is centered on the personal needs of students, as well as their day-to-day interactions taking place outside of the formal academic setting, such as in residence halls, dining spaces, student organizations, and other informal gatherings. Conversely, he highlighted the academic system of the model is centered on the formal education of students, which is facilitated in classrooms and laboratories, as well as other formal academic settings. Tinto further suggested that although these distinct systems exist within the institution, it is the experiences within these systems that impact student departure from the institution. He noted that it is critical

to understand the intellectual and social integration which may occur in the academic and social systems to better understand how the experiences in each of these areas may impact student departure. Tinto suggested that the experiences of individuals in academic and social settings, respectively, may have distinct effects on their departure from the institution.

Tinto (1993) further posited that a student's integration in either system is not mutually inclusive of equal integration in the other. For instance, he argues that a student can be successful in socially integrating into an institution but depart due to not having successfully integrated into the academic system (as evidenced by poor academic performance). Similarly, a student may perform well academically and achieve successful integration into the academic system but may still depart due to not having adequately integrated socially. Moreover, Tinto (1993) suggested that the impact of the integration in these systems varies depending on the level of importance an institution gives to these systems. He makes a distinction between the two, noting:

Maintenance of adequate levels of grade performance in the academic system is, for most colleges, a minimum formal condition for persistence. Integration or membership in the social system is not. Failure to attain a minimum grade level leads to academic dismissal. But failure to meet the "minimum standards" of the social system need not lead to departure. Though departure often results, it does not arise out of any formal dictate or requirement (Tinto, 1993, p. 107).

While it is critical to note the interconnectedness of the academic and social systems as they relate to student departure, the current study focused on the 'academic system' of Tinto's (1993) Model of Institutional Departure, as outlined in Figure 2 in Chapter 1. More specifically, this current study was designed based on the academic system of Tinto's model. It served as the theoretical framework for this current study due to its direct alignment with the student success course evaluated. As outlined in Figure 2,

the academic system encompasses grade performance, intellectual development, academic integration, and goal alignment, all of which the course in question targets.

Review of Literature

According to the National Center for Education Statistics (2021), student retention is defined by the percentage of first-time, full-time undergraduate students who re-enroll in the fall of the following academic year. Conversely, attrition is defined by the percentage of students who drop out before the start of their second year of postsecondary education (American Society for Public Administration, 2018). Both retention and attrition have been notable terms within the realm of higher education and have been studied for decades due to their implications on individual students and institutional success (McNeely, 1937; Spady, 1970, 1971; Summerskill, 1962; Tinto, 1975, 1993, 2006; Williams et al., 2018; Xu, 2017).

Facilitators of Retention

Several factors have been identified as contributors to academic success and retention, both from an individual and institutional perspective that includes cognitive and non-cognitive factors such as psychological and personality characteristics, demographics, socioeconomic status, student behaviors, academic performance and ability, and institutional environment (Barclay et al., 2018; Caviglia-Harris & Maier, 2020; Millea et al., 2018; Westrick et al., 2015; Xu, 2017).

Cognitive Factors

Cognitive factors, such as high school GPA, SAT/ACT scores, and first-year college performance, have a significant impact on retention and academic success

(Caviglia-Harris & Maier, 2020; Millea et al., 2018; Tierney & Duncheon, 2015; Westrick et al., 2015). In their study of determinants of college retention, Millea et al. (2018) found that retention rates were higher for students who were academically prepared to enter college (indicated by high school GPA and ACT/SAT scores), those who performed well in college courses, and those who received merit-based grant aid and scholarships. Similarly, Williams et al. (2018) studied the predictability of cognitive and non-cognitive factors on student retention and found that the same factors, with the exception of grants and scholarships, which were not included in their study, were reliable predictors of student retention. Williams et al.'s (2018) study revealed academic preparedness (high school GPA and ACT/SAT scores) as the strongest predictor of college retention. Furthermore, Williams et al. (2018) suggested that if students perform well academically their first semester, this likely will assist in a successful transition to college, which increases the probability of retention. Although considered non-cognitive factors, their research demonstrated that financial status (refers to whether the student receives financial aid to cover college expenses), as well as residence status, were also among the strongest predictors of retention.

Similarly, Westrick et al. (2015) revealed that ACT scores, high school grades, and socioeconomic status were significant predictors of college performance and retention. In line with Millea et al.'s (2018) and Williams et al.'s (2018) findings, Westrick et al. (2015) found that both ACT scores and high school academic performance were highly correlated with first-year academic performance, which was the strongest predictor of retention. Westrick et al.'s (2015) findings pointed to the importance of college preparedness and its impact on first-year success and overall retention.

Furthermore, Caviglia-Harris and Maier (2020) also examined cognitive and non-cognitive factors and their relationship to college retention and academic success. Their research also revealed that cognitive factors, such as high school GPA, SAT score, and GPA in the previous semester significantly impacted college GPA. The researchers noted that high school students with higher GPAs and higher SAT scores will likely have higher GPAs in college (Caviglia-Harris & Maier, 2020). Similar to Westrick et al. (2015), Caviglia-Harris and Maier's (2020) findings highlighted the importance of college preparedness and its impact on college academic performance. As Tierney and Duncheon (2015) suggested, high school academic performance is strongly correlated to performing well academically in college, which, in turn, is an indicator of postsecondary outcomes.

Non-Cognitive Factors

The literature also points to a variety of non-cognitive factors related to academic success and student retention (Barclay et al., 2018; Caviglia-Harris, 2020; Xu, 2017). From an individual standpoint, self-motivation, such as student commitment to degree completion, is critical to intent to drop out (Xu, 2017). Barclay et al.'s (2018) research supported this notion. In examining honor students in comparison to at-risk students, Barclay et al. (2018) found that honor students considered themselves more ambitious, having a positive approach to learning, had an increased sense of conscientiousness, a greater level of commitment, and were self-motivated. Similarly, Caviglia-Harris and Maier (2020) examined conscientiousness and grit and their association with college academic performance and degree attainment. They found that non-cognitive factors such as conscientiousness and grit were strong predictors of higher college GPA and degree

completion. Their results suggested that characteristics such as learning how to study, and breaking tasks into smaller parts, might help students improve their GPAs (Caviglia-Harris & Maier, 2020).

Sun et al. (2017) also sought to examine non-cognitive factors affecting at-risk college students in a self-regulatory class. In an effort to understand how learning behaviors and motivation are related to academic achievement, they examined relationships between self-efficacy, learning and study strategy indicators, and their relationship with academic outcomes. Sun et al. (2017) found that at-risk first-year students performed better when they had high self-efficacy, a higher-level goal setting approach, an attitude of persistence, and the ability to be academically engaged in the classroom despite distractions. As highlighted by the researchers, their findings are consistent with previous studies that demonstrated the positive impact of self-efficacy on academic performance (Sun et al., 2017).

Similarly, Wu (2019) sought to examine the extent to which academic motivation and academic engagement influenced students' academic achievement (college GPA). Wu's (2019) research yielded significantly positive effects of academic motivation on academic engagement and academic achievement. Nevertheless, Wu (2019) suggested that in addition to the self-motivation college students possess, institutions of higher education can also take an active role in facilitating academic motivation. Wu (2019) recommends training students on study skills, self-regulation and cognitive skills, and goal-setting skills, which will shift students' academic approach from performance orientation to learning orientation and promote their positive academic motivation.

Moreover, Wu (2019) suggested that student-faculty and student-peer interaction provide a social environment for students to foster their motivation, which can promote academic achievement and engagement—findings that further support Tinto’s (1993) Model of Institutional Departure, particularly the significance of both a social and academic system to the academic success and retention of college students. Wu’s (2019) findings and recommendations highlight the role institutions of higher education play in influencing non-cognitive factors such as academic motivation, which can positively impact academic performance and engagement, both of which are critical to student retention (Tinto, 1993). This observation points to the significance of institutional facilitators in students’ academic success and retention.

Institutional Facilitators of Retention and Academic Success

From an institutional standpoint, several facilitators of student retention and academic success have also been identified by researchers. More specifically, the significance of institutional commitment to retention has been well established in the literature (Xu, 2017). As Xu (2017) noted, students’ commitment to their institution may be improved by interventions designed to increase their social and academic engagement. These interventions include academic advising, quality teaching, extracurricular activities, faculty support, and faculty and peer-student interactions, which were found to positively impact student retention by facilitating formal and structured interactions between faculty and students (Wu, 2019, Xiao et al., 2020; Xu, 2017).

In line with Tinto’s (1993) Model of Institutional Departure, Xu (2017) examined how college environment affects student retention. Xu’s (2017) findings indicated that an

academic and a social dimension contributed to student integration. The researcher found that academic integration (measured by college GPA) significantly influenced student intent to drop out, which points to the importance of academic performance on student retention. Additionally, Xu (2017) found that an institutional environment characterized by control over academic quality and a supportive learning environment was significantly associated with student persistence. As further explained by Xu (2017), academic support services such as academic advising and academic programs aid in increased contact between students and faculty, which results in increased success and reducing student attrition.

Similarly, Xiao et al. (2020) found that students who participated in student-advisor interactions, student-faculty interactions, extracurricular activities, and utilized the library were more likely to be retained. As noted by Xiao et al. (2020), of the four involvement practices, student advisor interaction was the strongest predictor of retention, given the support academic advisors provide students in academic areas as well as referral to resources. Furthermore, the authors suggested that advisors help facilitate academic and social involvement for students, resulting in their overall college success (Xiao et al., 2020). This observation aligns with Xu's (2017) and Wu's (2019) findings on the significance of a social environment has on academic performance and further supports Tinto's (1993) Model of Institutional Departure regarding the role academic and social systems play in student retention.

Barriers to Retention

Barriers to retention pose a significant threat to students' academic success. Among these barriers, researchers have identified that when students lack a sense of

belonging, this can negatively impact their motivation and retention (O’Keeffe, 2013). As noted by O’Keeffe (2013), feelings of rejection and the inability to develop a sense of belonging within higher education is a main cause of student attrition. Similarly, Kezar et al. (2020) noted that a sense of belonging has been identified by scholars as an integral part of students’ first-year experience and college persistence. Additionally, as noted by Beasley et al. (2020), research has demonstrated that the more engaged students are on campus, the more positive educational outcomes they will have in comparison to their less engaged peers. Conversely, research has also demonstrated that issues surrounding a lack of sense of belonging are more prevalent amongst students from low socioeconomic status and students of color, which are considered underrepresented student groups at higher risk of attrition (Ardoin, 2018; Banks & Dohy, 2019; O’Keeffe, 2013).

Impostor Syndrome

In addition to the negative impact a lack of sense of belonging has on underrepresented student groups, impostor syndrome can also have an adverse effect on their academic performance, retention, and graduation rates (Ramsey & Brown, 2018). Impostor syndrome is characterized by an individual’s strong feelings of inadequacy, difficulty with internalizing success, and the belief they have deceived others into thinking of them as competent individuals, despite accomplishments that demonstrate otherwise (Lee et al., 2021; Ramsey & Brown, 2018). Within a college setting, impostor syndrome can stem from feelings of inadequate academic performance in comparison to peers within a new environment, which can lead to a decreased sense of belonging (Lee et al., 2021). This impediment to the growth of sense of belonging can affect college

success due to its negative impact on motivation and student retention (Kezar et al., 2020; O’Keeffe, 2013; Ramsey & Brown, 2018).

Moreover, students of color (from minoritized communities) are exposed to microaggressions and implicit bias—primarily exhibited by faculty and staff—and more often within Predominantly White institutions (PWIs), which also negatively impacts their sense of belonging and increases disengagement and attrition rates (Banks & Dohy, 2019). As noted by Banks and Dohy (2019), a recent study conducted by Moragne-Patterson and Barnett (2017) on the experiences of African American students and their interpretations of racial and gender-based aggressions revealed that “on predominately White campuses, African American students reported feelings of isolation, a lack of institutional support, and having to prove intellectual capability” (p. 120). Additionally, students reported feelings of loneliness associated with having limited interactions with students and faculty of similar racial or ethnic backgrounds and the perception that they are less capable than White students. Students also reported feelings of exhaustion with having to constantly prove their academic capability, despite previous evidence of their academic success (Banks & Dohy, 2019).

Academic Under Preparedness

An increased number of academically underprepared students are entering colleges and universities (Gebauer, 2019; Glessner, 2015; Hughes et al., 2012; Tinto, 1993). Academic under preparedness is defined as a lack of skills and knowledge needed to succeed in higher education, as well as a lack of knowledge related to career decision making (Hughes et al., 2012; Tierney & Duncheon, 2015). Underprepared students are disproportionately socioeconomically disadvantaged, come from low-income

backgrounds, and are typically African American or Latinx (Brookover et al., 2021; Brower et al., 2021; Hughes et al., 2012; Tierney & Duncheon, 2015). As noted by Gebauer (2019), underprepared students' K-12 experience is commonly affected by limited resources, poor academic rigor, lacks teacher interactions, and is void of self-reflection and assessment. In addition, the lack of basic skills in reading, writing, and mathematics characterize under preparedness—often requiring students to enroll in non-credit remedial coursework, which can negatively impact time to degree completion and further exacerbate financial hardships that underprepared students face (Brower et al., 2021; Glessner, 2015; Tierney & Duncheon, 2015). These characteristics increase the probability of students' risk of attrition (Hughes et al., 2012; Douglas & Attewell, 2014). Additionally, Hugues et al. (2012) noted that although remedial coursework is intended to increase students' chance of succeeding academically, this does not equate to increased retention. National data showed that freshmen enrolled in remedial coursework (underprepared students) were retained at lower rates than those who were not enrolled in the remedial course (Hughes et al., 2012). As such, Hugues et al.'s (2012) observations suggest that academic under preparedness increases the likelihood of student attrition.

Furthermore, academic under preparedness has been exacerbated by the impact of the COVID-19 pandemic and its disruption to teaching and learning across the globe (Soysal et al., 2022; Xu et al., 2022). As posited by Ashta et al. (2023), “the academic loss from the pandemic will affect this generation's students for years, unless appropriate recovery efforts can be identified and implemented, particularly for students in vulnerable groups” (p. 258). Moreover, the researchers posited that preliminary estimates project a 30% and 50% learning loss in reading and mathematics for 9-12 grade students,

respectively, by the start of the 2020-2021 school year. This suggests the pandemic has had a significant negative impact on academic preparedness of high school students who aim to enroll in postsecondary education.

Academic Underperformance

As noted by Hamman (2018) and McGrath and Burd (2012), many students face academic barriers in their first year, which result in academic underperformance and academic probation. Academic underperformance is characterized by students' inability to meet minimum academic standards set by their respective institutions of higher education (Bowman et al., 2020). Commonly, number of credits earned and a term and/or cumulative 2.0 GPA on a 4.0 scale is the minimum threshold used by colleges and universities as a measure of satisfactory academic progress (Hamman, 2018). The minimum standard has been set at a 2.0 GPA, as this is the minimum the vast majority of institutions of higher education require to graduate, as well as the minimum requirement to qualify for federal and state financial aid (Hamman, 2018).

In addition to its impact on academic under preparedness, the COVID-19 pandemic also posed significant challenges to persistence, academic performance, and graduation outcomes for college students (Soysal et al., 2022), which have resulted in increased concerns related to academic underperformance. The switch from in-person to online and virtual learning has resulted in a decrease in students' academic motivation, use of tutorial services, and instructor office hours—all of which had negative implications on academic performance (Soysal et al., 2022). Additionally, the researchers posited that online learning caused a disruption to the educational environment students were accustomed to—more specifically, unreliable internet connection issues, which

disproportionally negatively impact students from rural communities. The impact of academic underperformance has been established within the literature as a risk factor relative to student attrition (Bowman et al., 2020; Hamman, 2018; McGrath and Burd, 2012).

When students fail to meet satisfactory academic progress requirements, they are subsequently placed on academic probation (Bowman et al., 2020; Casey et al., 2018; Hamman, 2018; León et al., 2019). In contrast to students in good standing, students on academic probation are likely to have entered higher education academically underprepared, as evidenced by lower high school GPAs (Bowman et al., 2020). In addition, students on academic probation are more likely to report stress-related and motivational obstacles and have a higher incidence of financial-related concerns (Bowman et al., 2020; León et al., 2019). Furthermore, students on academic probation are at high risk of attrition, particularly given the risk of subsequent academic suspension or expulsion if they fail to improve their academic performance (Bowman et al., 2020; Casey et al., 2018; León et al., 2019). As noted by León et al. (2019), once a student is on academic probation, the likelihood of retaining and graduating them decreases significantly.

Financial Barriers

While social and academic integration have dominated our understanding of student retention in the last three decades, findings also suggest finances are one of the most prevalent barriers to student retention, irrespective of students' financial status (Van Duser et al., 2020; Xu, 2017). In addition to the importance of social and academic integration on student retention, Xu's (2017) findings suggested that financial pressure

was the main barrier to student retention. The researcher further suggested that while Tinto's (1993) Model of Institutional Departure highlights the importance of a social system and an academic system on the academic success and retention of students, it fails to consider financial factors' impact on student retention today (Xu, 2017). However, Tinto's later research examined the role financial barriers play on students' academic outcomes and found that these barriers negatively impact students, especially those who are considered at-risk (Engle & Tinto, 2008; Roble, 2017; Vaughan et al., 2020).

Mental Health Concerns

Student wellness has also emerged as a critical component of student success, particularly due to the increased stress levels students are experiencing as well as the inability to manage the rigors of higher education (Kognito, 2015; Martin, 2021). These stressors can aggravate existing mental illnesses or prompt symptoms in students who may be predisposed to mental illness (Kognito, 2015). Over the last decade, college students have also experienced an increase in anxiety and depression, which can compromise their ability to function and excel academically (Kognito, 2015; Martin, 2021). As noted by Kognito (2015), depressed and anxious students are more likely to miss classes, take time off, and drop out.

More recently, the impact of the COVID-19 pandemic on college students has been made evident in the psychological distress, posttraumatic stress symptoms, poor mental health and mental health illness, and increased stress and anxiety students are experiencing as a result of potential uncertainty and academic interruptions, among other challenges (Xu et al., 2022). Additional implications emerged in the literature relative to the impact of the pandemic on minority students within institutions of higher education.

Molock and Parchem (2021) examined the impact of the COVID-19 pandemic on the educational experiences and mental well-being of minority students (Black, Hispanic/Latino/a, and multiracial) in the U.S. The study revealed that “many racial and ethnic minority students in the sample experienced disruptive changes in their finances, living situation, academic performance, as well as educational and career plans... many students reported several mental health challenges and experiences of racial discrimination” (Molock & Parchem, 2021, p. 2403). Furthermore, the researchers posited that a recurrent theme reported by students was the adjustment to virtual learning and its implications. These implications include a shift to a home environment that is not conducive to virtual learning due to possible additional familial obligations, less private space, compromised quality of Internet connection, among other interpersonal challenges, all of which disproportionately impact students of color (Molock & Parchem, 2021).

Similarly, Kang et al. (2023) note that students of color have been disproportionately affected by the stress associated with the pandemic. Furthermore, the researchers posit that ‘minority status stress’ (elevated stress levels in students of color) has been linked to negative mental health outcomes, negative academic performance as a result of discrimination and racism, and feelings of impostor syndrome- all of which “may have been further exacerbated by the pandemic-related risks they have faced” (Kang et al., 2023, p. 346).

Importance of Retention

Student retention has been established in the literature as a critical measure of long-term student success as well as institutional success (Aljohani, 2016; Alzen et al., 2021; Banks, 2019; Hanover Research, 2014; Tinto, 1993; Xu, 2017). Institutions of

higher education that fail to retain and graduate their students face challenges related to reputation, institutional effectiveness, threatened financial stability due to lost revenue and resources, and loss of future contributions from alumni (Barclay et al., 2018; Hanover Research, 2014; Kognito, 2015). In addition, students who drop out may do so with an exorbitant amount of debt, while lacking the education and skills needed to find gainful employment to pay for said debt and simultaneously decreasing future earning potential (College Possible, 2018; Hanover, 2014; Shaw & Mattern, 2013). Students' inability to obtain well-paying employment opportunities does not only impact the student and institutions of higher education, but also society as a whole (Kognito, 2015; Trostel, 2015). In addition, as noted by College Possible (2018), obtaining a postsecondary degree is not limited to economic value, earning potential, or acquired skills; there are also intangible benefits involved.

In addition to the economic and financial benefits associated with obtaining a college degree, college graduates report being in very good or excellent health, have a longer life expectancy, lower incidence of disability, lower likelihood of unemployment, greater job satisfaction, and significantly higher likelihood of being happy (Tamborini et al., 2015; Trostel, 2015). Moreover, obtaining a college degree is linked to increased civic engagement, lower crime rates, less state expenditures on welfare programs and policing, and promotes upward social mobility (Blagg & Blom, 2018; Greenstone et al., 2014; Soria et al., 2014; Trostel, 2015). Given these findings, student retention is of critical importance to both students and institutions of higher education, given its direct impact on degree attainment, which, in turn, directly affects individual and institutional long-term success (Banks & Dohy, 2019; Horton, 2015; Williams et al., 2018).

Student Attrition for At-Risk Students

The first year of college can be a difficult time for students and is characterized by maladaptive responses ranging from separation from family, friends, and other past communities, while adapting to a new environment (Connolly et al., 2017; Engle & Tinto, 2008; Guarneri & Connolly, 2019; O’Keeffe, 2013; Tinto, 1993). These challenges can lead to academic obstacles and student attrition, especially for at-risk students (Engle & Tinto, 2008; Guarneri & Connolly, 2019; Tinto, 1993). At-risk students are defined as underrepresented students, first-generation college students, low-income students, minority students, and underprepared students who are often confronted with a myriad of challenges relating to access, the transition to college, and degree completion—especially financial obstacles (Brookover et al., 2021; Roble, 2017; Tierney & Duncheon, 2015).

Low-Income Students

As noted by Soria et al. (2014), low-income students experience a variety of barriers related to the cost and affordability of a postsecondary degree. The researchers found that irrespective of their academic ability, low-income students are less likely to attend college, persist, and graduate in comparison to students from higher income families or those who are not first-generation college students (Soria et al., 2014). They posited that these decisions not only negatively impact students’ immediate college experience, but also serve as disruptive barriers to success, delay degree completion, and lead to increased student debt upon graduation—further promulgating the financial obstacles that hinder their progress (Soria et al., 2014).

First-Generation Students

Similarly, as noted by Vaughan et al. (2020), first-generation college students face financial challenges that often result in concurrent employment in addition to taking college courses. The researchers further suggested that this often results in less time and commitment to academic-related requirements and less contact with faculty members, in addition to reluctance to seek faculty support, all of which increase student attrition (Vaughan et al., 2020). In addition, first-generation college students experience academic barriers, lower grades, are underprepared, have less access to financial resources, and work more while matriculated as college students in comparison to their continuing-generation peers (Engle & Tinto, 2008; Ricks & Warren, 2021; Quinn et al., 2019). In a study conducted by Holmes and Slate (2017) exploring the differences in GPA by gender and ethnicity/race as a function of first-generation status, the researchers found that first-generation community college students had statistically significantly lower GPAs than did non-first-generation community college students.

As Engle and Tinto (2008) suggested, low-income and first-generation college students face barriers to becoming academically and socially integrated in college by way of study groups, interactions with peers and faculty, and extracurricular activities—which have been established as critical to college success (Engle & Tinto, 2008; Tinto, 1993; Wu, 2019; Xu, 2017). Quinn et al. (2019) further supported this notion by noting that first-generation college students can face familial resistance characterized by pressure to maintain their family identity, while others may have unreasonable expectations placed on them to perform well.

Minority Students

Within education discourse, ‘minority students’ and ‘students of color’ are categorized as students from racial and ethnic groups that have been historically underrepresented in institutions of higher education. These terms are used interchangeably and represent students from racial and ethnic backgrounds including “... Black, Hispanic, Asian, Pacific Islander, American Indian/Alaska Native, and of Two or more races” (National Center for Education Statistics, 2019; National Center for Education Statistics, 2023). As noted by Banks and Dohy (2019), national data points to concerning trends in degree attainment of African American and Hispanic students in comparison to their White and Asian peers, which merit further investigation.

As highlighted by Banks and Dohy (2019), national data demonstrated that African American students were the least likely to graduate, followed by Hispanic students, when compared to White and Asian students (College Possible, 2018; Hanson, 2021). Banks and Dohy (2019) posited that clear disparities between students of color and their peers exist, noting these disparities are further exacerbated by their misclassification as an achievement gap. This misclassification places the onus on the individual student for their academic under preparedness and fails to acknowledge the role having access to resources that promote college preparation and career readiness play in students’ academic success and achievement (Banks & Dohy, 2019).

They further suggested that within a college setting, students of color are also more likely to experience feelings of isolation, stereotyping, and lack of access to high quality mentorships, all of which negatively impact student engagement, retention, and degree completion (Banks & Dohy, 2019). Kezar et al.’s (2020) observations further

supported this notion, stating that students of color report a lower sense of belonging in comparison to White students due to undesirable or challenging cultural and social experiences. Banks and Dohy (2019) further posited that instances of implicit bias affect student engagement and their sense of belonging, which has been established as a key factor in increasing the probability of student attrition (O’Keeffe, 2013).

Male Students and Gender Differences

According to the National Center for Education Statistics (2021), gender differences can be observed in the retention and graduation rates of undergraduate students. More specifically, in 2019, the six-year graduation rate for first-time, full-time female students was six percentage points higher than that of male students (66% vs. 60%) (National Center for Education Statistics, 2021). The gap has remained relatively consistent over the last decade, with female students graduating at a rate 5%-6% higher than male students (Verbree et al., 2022; National Center for Education Statistics, 2019, 2020, 2021; Farmer & Hope, 2021). These graduation rates account for students who graduated from the same institution at which they began their postsecondary degree (National Center for Education Statistics, 2019, 2020, 2021), indicating female students are retained at higher rates than their male counterparts.

Moreover, among ethnic groups, the graduation rate gap between genders has shown to be the widest for Black students (10% higher for females) when compared to other ethnic groups including White, Hispanic, Asian, Pacific Islander, American Indian/Alaskan Native, or those of two or more races (National Center for Education Statistics, 2019). These findings suggest Black males are at the highest risk of attrition among all races and between both sexes, especially within Predominantly White

Institutions (PWIs) (Hotchkins & Dancy, 2015; Strayhorn, 2014). As noted by Strayhorn (2014), factors influencing Black male student attrition include environmental, social, and psychological factors that could impact their sense of belonging, as well as their academic and social involvement, all of which are critical to their success.

Furthermore, Hotchkins and Dancy (2015) noted that the lack of enrollment and degree attainment by Black males is influenced by racial and gendered phenomena primarily found in PWIs where racism is prevalent. As noted by Banks and Dohy (2019), in a study conducted by Dulabaum (2016) on retention barriers for African American and Hispanic males, “students of color stated that they did not always relate to instructors, counselors and teachers, with one interviewee revealing feelings that professors do not care about students’ success...” (p. 120). Nevertheless, low enrollment and persistence rates of Black males at HBCUs are consistent with those of PWIs (Palmer et al., 2015).

Palmer et al. (2015) compiled empirical literature focused on the experiences of Black male students at HBCUs to inform a model of persistence and retention for this population of students. Some emerging themes in the literature underscore the obstacles Black male students face within HBCUs in terms of their persistence and retention. Among these challenges, the literature revealed (1) a lack of Black male role models and mentors who model the importance of engaging in educational activities, (2) a lack of male faculty engagement with Black male students both inside and outside the classroom, and (3) a lack of financial aid and institutional financial support (Palmer et al., 2015). These findings and observations suggest there is a need for retention and persistence strategies to help reduce Black male student attrition, irrespective of the type of institution they attend (Palmer et al., 2015).

Strategies for Supporting Retention of At-Risk Students

Xu (2017) posited that it is time for higher education administrators to re-examine retention efforts and design strategies to create a supportive learning environment centered on the effective use of resources with the intent of translating institutional commitment to student success. If students can overcome the obstacles associated with transitioning to higher education, this can lead to a variety of successful outcomes such as persistence, career development, social competencies, academic self-efficacy, improved sense of belonging, and identity formation (Guarneri & Connolly, 2019; Harrington & Orosz, 2018). In line with this approach, institutions of higher education are pursuing alternative strategies to help underprepared and at-risk students succeed. These alternative approaches include early intervention strategies such as summer bridge programs, TRIO programs, first-year experience programs, academic advising, career advising, counseling services, self-care strategies, academic recovery courses, and mentoring programs to provide students with academic preparation, social support, and improve their wellness (Fox, et al., 2017; Grace-Odeleye & Santiago, 2019; Guarneri & Connolly, 2019; León et al., 2018; Lynch & Lungrin, 2018; Martin, 2021; Pringle et al., 2017; Vaughan, et al., 2020).

Summer Bridge Programs

Summer bridge programs are designed to assist students with transitioning and adjusting to higher education by providing opportunities for students to develop the academic and social skills necessary for college success (Cabrera et al., 2013; Grace-Odeleye & Santiago, 2019).

Grace-Odeleye and Santiago (2019) noted that while summer bridge programs vary by institution and the student populations they serve, they commonly offer the following resources: college life orientation, overview of resources, academic advisement, and the development of college success skills. Additionally, Grace-Odeleye and Santiago (2019) suggested that aside from providing support, the summer bridge program helps promote students' sense of belonging by providing opportunities for meaningful social and peer connections that aid in their integration into their college community. Furthermore, their review of diverse models of summer bridge programs revealed there is an extensive body of empirical data that supports the importance of summer bridge programs in relation to promoting a successful college transition, increasing academic readiness, persistence, and social integration for first-generation, low-income, and underprepared students (Grace-Odeleye & Santiago, 2019).

Grace-Odeleye and Santiago's (2019) observations align with Cabrera et al.'s (2013) study, which found that participation in a summer bridge program predicated an increased first-year GPA and the likelihood of retention. In line with these findings, Millea et al. (2018) noted academic performance in the first year as a key indicator of retention. Additionally, Douglas and Attewell (2014) posited that summer bridge programs target academic under preparedness by providing math, reading, and writing improvement opportunities. Furthermore, Douglas and Attewell (2014) proposed that students in summer bridge programs are trained on the development of study skills and planning, as well as have a positive impact on academic momentum by affording students the opportunity to avoid remedial and developmental courses that could affect their academic progress. Grace-Odeleye and Santiago's (2019) findings, and Douglas and

Attewell's (2014) observations point to the importance of strategies designed specifically for the success of at-risk student populations.

First-Year Experience Seminars

As a result of understanding the impact of the first year on academic success and retention, institutions of higher education have turned their attention to creating a first-year experience through a variety of programs, especially the implementation of first-year seminars, which have demonstrated to improve retention and academic success outcomes (Guarneri & Connolly, 2019; Harrington & Orosz, 2017). First-year seminars (FYSs) are designed to counteract the obstacles associated with transitioning to college by providing guidance, promoting critical thinking, facilitating the development of academic success skills, assisting students in their academic and social integration, and improving engagement and retention (Connolly, et al., 2017; Guarneri & Connolly, 2019). Connolly et al. (2017) found that participation in a FYS helped at-risk students succeed academically in their first semester of college, as evidenced by their improved GPAs.

In addition, FYSs provided students with opportunities to connect with academic and social communities of the institution and apply learning skills and strategies acquired through the course to other courses, which improved their academic performance (Connolly et al., 2017). Connolly et al.'s (2017) findings demonstrated that FYS participants experienced an increase in peer interactions, improved sense of belonging to the college community, frequent use of support services, and improved academic outcomes, which align with Tinto's (1993) Model of Institutional Departure regarding the importance of the integration into academic and social systems to student success (Connolly et al., 2017; Harrington & Orosz, 2018).

TRIO Student Support Services

TRIO Student Support Services (SSS) are federally funded programs designed to support at-risk students—particularly those from low-income families, first-generation college students, and students with disabilities—with the intent of increasing college retention and degree completion (Quinn et al., 2019; Sabay & Wiles, 2020; U.S. Department of Education, 2020; Vaughan, 2020). Sabay and Wiles (2020) noted that in addition to building students' academic resiliency, TRIO programs can help students improve their navigational capital, which is defined by the ability to overcome social challenges and seek support within the institution. According to the U.S. Department of Education (2020), TRIO SSS programs are required to provide academic tutoring, and may also offer a range of services such as personal counseling, career counseling and goal setting, academic advisement, mentoring programs, and housing assistance, which aid in the development of the navigational capital Sabay and Wiles (2020) noted as critical to successful student outcomes.

Similarly, Quinn et al. (2019) examined factors identified as instruments of success by students participating in a TRIO SSS program, as well as the factors they identified as barriers to their success. Quinn et al. (2019) studied the abilities, relationships, and other resources students can employ to reach their goals, which were categorized as power variables as well as personal and social demands on a person, which were characterized as load variables. In line with Soria et al.'s (2014) and Xu's (2017) findings, Quinn et al. (2019) found that finances emerged as a load variable, due to the stress it places on students as a result of balancing financial obligations while maintaining a full-time academic course load. However, participation in the TRIO SSS program was

identified as a contributor to student success (Quinn et al., 2019). Quinn et al.'s (2019) findings revealed that TRIO SSS students identified participation in the TRIO SSS program as a power variable due to the support they received from formal services offered, as well as the personalized support from TRIO SSS practitioners.

Moreover, Quinn et al. (2019) found that benefits of participating in a TRIO SSS program, such as priority enrollment, tutoring services, personal support and encouragement, and advisement, contributed to students' successful navigation of the college experience, results similar to Sabay and Wiles' (2020) on the importance of these factors as they relate to developing navigational capital. Furthermore, Quinn et al. (2019) noted that the development of relationships between first-generation college students and faculty and non-faculty staff can help mitigate load variables and enhance the power variables that contribute to first-generation students' success.

Vaughan et al. (2020) noted the importance of both FYS and TRIO SSS programs, which often overlap in the services they offer first-generation students. Often, a customized approach combining more than one strategy is needed by institutions of higher education to help improve the outcomes of their unique student populations (Vaughan et al., 2020). Vaughan et al. (2020) examined the impact of TRIO programs and FYS on persistence and retention. They sought to examine the intersection of these two types of programs and their impact on first-semester, first-generation college students. Vaughan et al. (2020) noted that their study provided additional evidence that academically rigorous, evidence-based courses can be an effective model for serving first-year students, including those who are underprepared and served by TRIO programs. Furthermore, Vaughan et al. (2020) posited that cross-collaboration between research-

based FYS and a TRIO SSS program serving first-generation, low-income students can help fill the gap between said students and their peers.

Academic Advising

Academic advising has also been identified as one of the most common student support services, often facilitating interactions students have with the institution and increasing student satisfaction, navigational capital, and retention (Alzen et al., 2021; Lynch & Lungrin, 2018; Sabay & Wiles, 2020; Swecker et al., 2018). These services include degree planning, academic goal setting, problem solving, major and course selection, navigation of academic policies, registration, decision making, and problem solving (Lynch & Lungrin, 2018; Swecker et al., 2013). These services are particularly helpful for at-risk students on academic probation as well as first-generation students (Swecker et al., 2013).

Swecker et al. (2013) examined the significance of advising in the retention of first-generation college students and found that the more meetings a student had with their advisor, the higher their chances of being retained. They posited that these findings support retention theories centered on student interaction, engagement, and involvement and their positive impact on retention (Schwebel et al., 2012; Swecker et al., 2013). More specifically, Swecker et al. (2013) noted that in line with previous findings, a student's sense of academic and social integration can influence the likelihood to persist—an observation that further supports the relevancy of Tinto's 1993 Model of Institutional Departure to more recent research.

In addition to the frequency of academic advising, the timing of advising interventions is also critical to the success of first-year students (Fox et al., 2017;

Schwebel et al., 2012). Early student advising sessions provide opportunities for students to develop meaningful connections to their institution of higher education, as well as identify resources that will aid in their successful transition (Fox et al., 2017). In addition, proactive advising has become a great approach to assist at-risk students (Fox et al., 2017). Instead of relying on early warning systems, proactive advising, also known as intrusive advising, focuses on connecting with students to preempt student challenges and address these obstacles before they result in academic failure, social discontent, or student attrition (Fox et al., 2017; Schwebel et al., 2012). As further noted by Kalinowski Ohrt (2016), proactive advising provides opportunities for relationship building as well as the timely exploration of degree requirements, both of which contribute to first-generation student success.

In line with Swecker et al.'s (2013) observations on the importance of academic advising on student success, Chiteng Kot (2014) posited that academic advising is instrumental in helping students navigate and integrate within the academic and social environments of their institution. As noted by Chiteng Kot (2014), "Tinto (1993) indicated that effective retention programs recognize academic advising as being at the core of institutional success to educate and retain students" (p. 529). In their study on the impact of academic advising on first-year performance, Chiteng Kot (2014) found that academic advising had a positive and significant impact on first-term GPA, second term-GPA, and first-year cumulative GPA. Considering first-year academic performance is a strong predictor of student retention, their findings support Tinto's (1993) observations on the impact of academic advising on retention (Chiteng Kot, 2014).

Career Advising

Career advising is a process by which students learn to define academic and career goals based on their individual interests, values, and abilities, with career services ranging from career counseling, career fairs, workshops, and experiential learning opportunities (Ledwith, 2014). Career advising is often an optional service that is passively offered to students, which can result in additional disadvantages to first-generation, low-income students already faced with inequities in their pursuit of higher education (Pringle et al., 2017; The Career Leadership Collective, 2021). This can be categorized as a missed opportunity given the combination of academic and career-related aspects of career advising (Ledwith, 2014). Conversely, integrating career advising with academic advising can provide opportunities for students to engage with advisors in frequent individualized goal-oriented interactions, which can improve their success and retention (Lynch & Lungrin, 2018; The Career Leadership Collective, 2021). Furthermore, The Center for Leadership Collective (2021) observed that when introduced in the first year, as well as integrated with academic advising and courses, career advising can have profound effects on underrepresented student groups by providing equitable opportunities.

More specifically, studies have demonstrated that career learning and goal setting can significantly influence retention among low-income students and that 50% of student attrition can be attributed to lack of course relevance to students' lives or career goals (The Center for Leadership Collective, 2021). This points to the significance of integrating career advising and academic advising, given their impact on shared student success goals (Ledwith, 2014). Ledwith (2014) suggested that institutions of higher

education can promote interdepartmental collaboration between these areas through shared programming and resources such as cross-training, creating targeted communication that includes key staff members, and making referrals. By making an intentional effort to work together, academic and career departments can provide the career developmental services college students need (Ledwith, 2014). Ledwith's (2014) recommendations were further supported by Vaughan et al.'s (2020) observations on the importance of a customized approach that encompasses cross-collaboration between institutional departments with the intent of promoting positive student outcomes.

Student Wellness Interventions

Given the psycho-social and academic challenges first-year underprepared students face when transitioning to college, increased concerns related to student wellness have prompted institutions of higher education to examine and create interventions to address these challenges (Cholewa & Ramaswami, 2015; Kognito, 2015; Martin, 2021). Interventions include counseling services, mental health programming, and self-care strategies (Cholewa & Ramaswami, 2015; Kognito, 2015; Martin, 2021). Among the various interventions employed, counseling services has emerged as a critical component of student wellness and academic success (Cholewa & Ramaswami, 2015; Kognito, 2015; Schwitzer et al., 2018).

Cholewa and Ramaswami (2015) examined the relationship between counseling and the retention and academic performance of underprepared first-year students. Cholewa and Ramaswami's (2015) findings revealed there was a significant relationship between students' GPA and counseling attendance in their first semester. In line with these findings, Schwitzer et al. (2018) also examined the relationship between college

counseling experiences and academic success and found that students who participated in counseling were more likely to experience increased GPAs. Cholewa and Ramaswami's (2015) and Schwitzer et al.'s (2018) findings suggest that student support services have a positive influence on academic outcomes. As noted by Kognito (2015), creating a culture of mental and emotional wellness on campus that provides a supportive environment for students is critical to their well-being and retention, particularly for those who might be at risk.

Academic Recovery Courses

Between 20 and 25% of undergraduate students will be placed on academic probation at least once during their college tenure (Bowman et al., 2020; Hamman, 2018; León et al., 2019). As noted by Gonzalez (2022), poor academic performance (below a 2.0 GPA)—resulting in academic probation and academic dismissal—has direct implications on students and institutions of higher education in various contexts. These implications include student financial aid eligibility in the form of Pell grants, which Gonzalez (2022) underscores accounts for over 33% of financial aid undergraduate students receive.

In addition to the financial implications of not earning a minimum 2.0 GPA for students, institutions of higher education are negatively impacted given the potential attrition rate due to academic dismissal students can face if they fail to improve their academic performance to minimum standards (Gonzalez, 2022). This directly impacts an institution's financial health due to lost revenue from student attrition. Gonzalez's (2022) conducted a study that demonstrated "losing only 136 students from a college that consistently enrolls over 2,500 undergraduate students within a 5-year span of cohorts

has a substantial impact to the financial health of the institution” (p. 81). More specifically, Gonzalez (2022) noted this accounted for nearly \$450,000 from student attrition, of which 88% was attributed to lost funds from students who were academically dismissed.

To address the challenges associated with academic underperformance, institutions of higher education offer academic recovery interventions to help students on academic probation improve their academic standing and increase their retention (Hamman, 2012; León et al., 2019). Among these interventions, academic recovery courses have proven to be effective in increasing student academic performance (i.e., GPA) and helping retain and graduate students on academic probation (Flynn, 2014; León et al., 2019; Mellor et al., 2015; McGrath & Burd, 2012). This is supported by Bowering et al.’s (2017) findings of their examination of the effectiveness of a 14-week intervention course on students placed on academic probation. In addition to improved cognitive strategies, and study skills reported by students who completed the course, 81% of participants’ GPA significantly improved by an average of .57 points. Of those who significantly improved their GPA, 66% improved their academic performance enough to no longer be on academic probation.

Similarly, León et al. (2019) conducted a study to assess the impact of a required course for students on academic probation and found that those who completed the course were approximately 20% more likely to be retained and graduate in comparison to those students on academic probation who did not take the course. McGrath and Burd’s (2012) study on a mandatory success course on freshmen placed on academic probation yielded similar results.

McGrath and Burd's (2012) study revealed that students on academic probation who completed a mandatory success course were more likely to be retained and graduate in comparison to students on academic probation who did not complete the course. McGrath and Burd (2012) attributed the course's success to the social and academic engagement it facilitated through its curriculum, in addition to the course being taught by academic advisors, given their academic expertise. The course also required meetings with a professor, academic advisor, student organizations or other student services (McGrath & Burd, 2012). McGrath and Burd's findings align with Tinto's (1993) Model of Institutional Departure and the role an academic and social environment play on the retention of students. As noted by Beasley et al. (2020), more research is needed to determine the impact of academic recovery courses on student retention and academic success; however, León et al.'s (2019) study, as well as McGrath and Burd's (2012) study, revealed academic recovery courses are worth noting and implementing as effective interventions to increase retention and academic success.

Chapter Summary

This chapter provided an overview of Tinto's (1993) Model of Institutional Departure, which is the theoretical framework that guided the present study. An extensive review of the literature revealed there are a variety of factors associated with retention and academic success, as well as student attrition. From an individual standpoint, several cognitive and non-cognitive factors have emerged as contributors to academic success and retention. More specifically, cognitive factors such as high school academic performance and first-year college academic performance have been directly linked to increased student retention and academic success. Given the significance of these factors,

the first year of postsecondary education has also been identified as a critical component of student retention and degree completion rates. In addition, non-cognitive factors such as self-motivation, conscientiousness, self-efficacy, attitude of persistence, academic engagement, and social integration are among a variety of psychological and personality factors that have also been identified as facilitators of academic success and retention. Conversely, the literature also revealed there is a myriad of barriers to academic success and retention, which especially affect underrepresented students.

Impostor syndrome, lack of sense of belonging, academic under preparedness, financial barriers, mental health concerns, and academic underperformance are among the most prevalent barriers to academic success and student retention. These barriers have been identified as key contributors to student attrition, which can have a long-term adverse effect on long-term institutional success, as well as student success. The importance of retention has been established in the literature given its direct relationship to graduation rates. The latter impacts institutional financial health, individuals' long-term economic outcomes, acquired knowledge and skills, and other intangible benefits including better health, longer life expectancy, decreased probability of unemployment, upward social mobility, and civic engagement, among others.

Degree attainment is especially challenging for at-risk student populations, which include students from low-income backgrounds, first-generation college students, academically under prepared students, and minority students. At-risk students are disproportionately impacted by financial obstacles, familial pressure, feelings of inadequacy, and lack the necessary resources to be academically prepared to enter college and develop the navigational capital needed to academically and socially integrate into

their institution of higher education. As a result of the barriers experienced by at-risk students, institutions of higher education are actively seeking ways to improve and design strategies to combat these obstacles. The literature revealed institutions of higher education have employed a variety of strategies designed to counteract these challenges including TRIO and Summer Bridge programs, first-year experience seminars, academic advising, career advising, student wellness interventions such as counseling, and academic recovery courses for students on academic probation. However, a customized and integrated approach that combines several strategies is often needed to address the specific needs of individual institutions of higher learning.

While an extensive amount of literature encompasses factors and facilitators related to academic success and student retention, the current state of research inquiry revealed there is a dearth of empirical research pertaining to students on academic probation (Hamman, 2018; McGrath & Burd, 2012). More specifically, there is limited research on the impact of student success courses on students on academic probation (Beasley et al., 2020; McGrath & Burd, 2012). Recent studies have shown that students on academic probation who complete a student success course have increased retention and graduation rates when compared to those who did not (Flynn, 2014; León et al., 2019; Mellor et al., 2015); however, more research is needed to identify the components of student success courses that aid students at risk of attrition (Beasley et al., 2020; McGrath & Burd, 2012).

The present study aimed to contribute to the body of research focused on examining and reframing existing student success strategies aimed at retaining high-risk students, such as students on academic probation, and increasing the probability of their

success. This empirical investigation sought to examine the relationship between a student success course and the retention and academic success of first-year students who completed the course and those who did not complete the course. The research questions guiding this study were founded on two objectives. The first objective of this study was to determine whether a significant difference could be observed in the retention and academic success of first-year students on academic probation who completed a student success course and those who did not, and if there were observable differences when accounting for quantitative and categorical variables such as high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The second objective was to determine which of the five required student success course components had the most impact on students' retention and academic success, based on their perception.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of the present study was to examine the relationship between a student success course and the retention and academic success of first-year students who completed the course and those who did not complete the course. The first objective of the study was to determine whether a significant difference could be observed in the retention and academic success of first-year students on academic probation who completed a student success course, and if there were observable differences when accounting for quantitative and categorical variables such as high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The second objective was to determine which of the five required student success course components had the most impact on students' retention and academic success, based on their perception.

To meet these objectives, two groups of students were examined in this study. The first was the intervention group, which consisted of first-year students on academic probation who completed the student success course in the second semester of their first year. The second was the control group, which consisted of first-year students on academic probation who did not complete the student success course. Observable group differences were documented.

This chapter provides an overview of the methodology used in this study. In this chapter, the present study's (1) research design, (2) research questions, (3) null hypotheses, (4) definition of variables, (5) population and sample, (6) data collection, (7) instrumentation and their validity and reliability, and (8) data analysis will be presented and described. The chapter will conclude with a summary on the methodology that guided the present study.

Research Design

This study employed an ex post facto, non-experimental quantitative design. Quantitative research produces results that can measure characteristics of a population of interest, provide explanations of predictions, and explain causal relationships (Salkind, 2010). More specifically, the objective of quantitative research designs is to employ statistical models to examine relationships between the studied variables with the goal of understanding, describing, and predicting the nature of a phenomenon (American Psychological Association, n.d.). Ex post facto research, also known as causal-comparative research, seeks to understand relationships between dependent and independent variables by examining past occurrences of a phenomenon (American Psychological Association, n.d.; Salkind, 2010). In this type of research design, the independent variable cannot be manipulated by the researcher, given the independent variable has already occurred (American Psychological Association, n.d.; Salkind, 2010). Instead, the researcher's objective is to compare two or more groups to determine if the independent variable affects the dependent variable (Salkind, 2010).

An ex post facto, quantitative design was appropriate for this study given past participation in a student success course (independent variable), and retention and

academic success (dependent variables) were examined for statistically significant differences between two groups—first-year students on academic probation who completed the student success course (intervention group) and first-year students on academic probation who did not complete the student success course (the control group). Both primary and secondary quantitative analyses were employed. Secondary analysis of quantitative data examines data that have been collected for a different purpose or by a different organization (MacInnes, 2020). Conversely, primary data analysis is performed on original data collected for a specific research study (Allen, 2017). In this study, a secondary analysis was used to examine existing data obtained from the Analytics Division of the Office of Strategic Planning and Institutional Effectiveness (OSPIE) to inform Research Questions 1-4. A primary analysis was performed on data collected using a survey to inform Research Questions 5-6.

Research Questions

For the purpose of stating the research questions succinctly, the researcher used the terms ‘intervention group’ and ‘control group’ to capture the two groups examined in this study.

The intervention group was comprised of students who (1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, Fall 2021 semester (2) were placed on academic probation after completing the first semester of their first year, and (3) completed the SCS:099—Strategies for Academic Success Course in the second semester of their first year.

The control group was comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester (2)

were placed on academic probation after completing the first semester of their first year, and (3) did not complete the SCS:099 Course in the second semester of their first year.

The five components of the SCS:099 Course are (1) completion of a series of modules focused on student success, (2) attending a meeting with an academic advisor/coach within the student's academic college, (3) attending two student success webinars facilitated by the Center for Academic Excellence at NC A&T State University, (4) completion of a career assessment, and (5) completion of a student success profile.

The research questions guiding this study were:

1. Is there a difference between the retention rate of the intervention group and that of the control group?
2. Is there a difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group?
3. Are there differences between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
4. Are there differences between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
5. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their academic success (improved GPA)?

6. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their retention?

The null hypotheses for questions 1-4 are outlined in the following section. Questions 5 and 6 were descriptive in nature and as such had no hypothesis to be empirically tested.

Null Hypotheses

1. There is no significant difference between the retention rate of the intervention group and that of the control group.
2. There is no significant difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group.
3. There is no difference between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.
4. There is no difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

Definition of Variables

In this study, participation in a student success course was the independent variable, and academic success and retention were the dependent variables. Quantitative variables were examined, including completion of the SCS:099—Strategies for Academic Success Course, high school GPA, SAT/ACT scores, first-year first and second semester

GPA, and retention rate. Categorical variables were also examined, including academic standing, gender, socioeconomic status, and first-generation status. These variables were conceptually and operationally defined as follows.

Retention rate is defined as:

The percentage of a school's first-time, first-year undergraduate students who continue at that school the next year. For example, a student who studies full-time in the fall semester and keeps on studying in the program in the next fall semester is counted in this rate. (U.S. Department of Education, 2021)

The operational definition of *retention rate* is the percentage of first-time, full-time students who returned the following fall semester as second-year, full-time students.

Academic Success is defined as “academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance . . . we include academic achievement for its obvious depiction of students’ academic performance and for its intended representation of academic ability” (York et al., 2015, pp. 5-6). The operational definition of *academic success* is a minimum 2.0 cumulative GPA, which is the minimum GPA requirement to improve from ‘Academic Probation’ to ‘Good Academic Standing’ at NC A&T State University.

First-time, full-time student is defined as an undergraduate student without prior postsecondary experience attending an institution of higher education and enrolled in at least 12 credits. This also includes students who earned college credits prior to graduating high school or in the summer term before their first fall term (National Center for Education Statistics, n.d.).

Student Success Course or *SCS:099—Strategies for Academic Success Course* is defined as a course specifically for students on academic probation to equip them with competencies for academic success (Undergraduate Bulletin of North Carolina

Agricultural and Technical State University, 2021). In this study, the operational definition of *student success course* is the SCS:099—Strategies for Academic Success Course offered to students placed on academic probation at NC A&T State University.

Academic Probation is an academic standing based on poor academic performance resulting in less than a cumulative 2.0 cumulative GPA (Undergraduate Bulletin of North Carolina Agricultural and Technical State University, 2021). The operational definition of *academic probation* in this study is failure to earn a minimum 2.0 cumulative GPA.

High school GPA is defined by the cumulative grade point average achieved after having completed secondary education.

Gender is defined as a social construct or social identity a given culture associates with an individual's biological sex (American Psychological Association, 2019). The operational definition of gender is male or female, given there are no additional distinctions at NC A&T State University (such as 'other') for students who may identify differently.

Socioeconomic status (SES) is defined by the standing of an individual or group in society and is based on social and economic factors that affect access to education and other resources that are critical to an individual's upward mobility (Dictionary.com, n.d.). The operational definition of *socioeconomic status* is twofold. Students who are recipients of the Federal Pell Grant will be classified as having *low socioeconomic status*, while those who are not Federal Pell Grant recipients will not be classified as having *low socioeconomic status*. Federal Pell Grants are offered to undergraduate students who are from low-income households (U.S. Department of Education, n.d.).

First-generation status is defined by a student whose parents did not complete a bachelor's degree (NASPA, n.d.).

Population and Sample

The population for this study was comprised of first-year students attending North Carolina Agricultural and Technical State University (NC A&T State University) who were placed on academic probation. NC A&T State University is a public, land-grant, Historically Black University located in the north-central region of North Carolina and has a population of over thirteen thousand students. A non-probability sampling approach was used to obtain a sample of first-time, full-time students placed on academic probation after the completion of the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester for the secondary data analysis. All qualifying students were included in the sample. From this sample, an additional sample of first-time, full-time students who (1) completed the SCS:099—Strategies for Academic Success Course, (2) earned a minimum 2.0 cumulative GPA at the end of their second semester, and (3) returned for their second year of college at NC A&T State University in the Fall 2020 semester, Fall 2021 semester, or Fall 2022 term respectively, were selected from the population for the primary data analysis. The majority of both samples identified as African American, which is traditionally the majority race represented across the entire student population at NC A&T State University.

Data Collection

Institutional Review Board (IRB) approval was secured for secondary data and primary data collection procedures from both Andrews University and North Carolina

A&T State University. Secondary data were obtained from the Analytics Division of the OSPIE at NC A&T State University on students in the control group, which is comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, and (3) did not complete the SCS:099—Strategies for Academic Success Course in the second semester of their first year. These data were obtained in the form of a secondary data set. This secondary data set included information on their first-time, full-time status, academic standing, enrollment in the SCS:099—Strategies for Academic Success Course in their second semester of their first year, high school GPA, SAT/ACT scores, first-semester GPA, second-semester GPA, gender, first-generation status, socioeconomic status, and second-year enrollment (as a measure of retention). These data were collected by NC A&T State University via student admissions applications, high school transcripts, entrance exam scores reported by the College Board and ACT.org, and academic records maintained by the OSPIE. The researcher requested the secondary data set from the Analytics Division of the OSPIE in the form of an Excel spreadsheet and then transferred it to SPSS for Mac version 28 for data analysis.

Once IRB approval was obtained, primary data were collected via an online survey created by the researcher and programmed in Qualtrics (Appendix A). An email including an informed consent and invitation to participate in the study was sent by the researcher to students in the intervention group via their NC A&T State University email. The email was sent to students in the intervention group who (1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester,

(2) were placed on academic probation after completing the first semester of their first year, (3) completed the SCS:099—Strategies for Academic Success Course in the second semester of their first year, (4) improved their GPA by the end of the second semester of their first year, and (5) continued their enrollment into the first semester of their second year (retention).

The email sent to the invited survey participants in the intervention group included a brief description of the study, how participants were selected, the expected time it would take to complete the survey, confidentiality measures, and an access link to the survey (Appendix B). Appendix B is a customized version of NC A&T State University’s IRB Consent Form, which the researcher edited based on the objectives of the present study. Participants were given the option to withdraw from the study at any time or skip any questions they did not wish to answer. The survey was open for a total of four weeks, and weekly reminders were sent to students to encourage their participation. Survey responses were stored in Qualtrics, then downloaded into an Excel spreadsheet for the cleaning, coding, and creation of a primary data set, and subsequently transferred to SPSS for Mac version 28 for data analysis.

Instrumentation for Secondary Data

For the collection of secondary data, the Analytics Division of OSPIE produced a secondary data set that included information on students in the control group. The control group was comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester (2) were placed on academic probation after completing the first semester of their first year, and (3) did not

complete the SCS:099 Course in the second semester of their first year. This secondary data set included information on the control group's first-time, full-time status, academic standing, enrollment in the SCS 099: Academic Success Course in their second semester of their first year, high school GPA, SAT/ACT scores, first-semester GPA, second-semester GPA, gender, first-generation status, socioeconomic status, and second-year enrollment (as a measure of retention). The researcher used this secondary data set to determine whether a significant difference was observed between the intervention group and the control group, and if there were observable differences when controlling for quantitative and categorical variables.

Reliability of the Secondary Data Set

Database reliability is the measure of accuracy and consistency of data as evidenced by data integrity, data safety, and data recoverability (Maintaining Database Reliability, Integrity, & Safety, 2020). More specifically, data integrity is achieved when data is defined correctly, is checked for errors, and is valid; data safety is evidenced by access control mechanisms such as password-protected measures prior to accessing the data set; and recoverability depends on backup and restore protocols ensured by the data keepers (Maintaining Database Reliability, Integrity, & Safety, 2020). In line with these reliability components (accuracy and consistency), the secondary data set created for this study was obtained from the Analytics Division of OSPIE, which performs data analysis and reporting for NC A&T State University. The Analytics Division adheres to ethical standards established by its national body, the Association of Institutional Researchers (AIR) and Family Rights and Privacy Act (FERPA) requirements, while striving to

process quality data and information that is accurate, consistent, and timely (Office of Strategic Planning and Institutional Effectiveness, n.d.).

The Analytics Division utilizes a series of computer-based data acquisition, data management, and data analysis programs such as Banner (IR), SAS EG, Tableau, and Digital Measures to support research, analytics, and reporting functions (Office of Strategic Planning and Institutional Effectiveness, n.d.). These computer-based programs allow for the reduction in human error, and ensure the data is complete (void of missing data) and valid, which increases data integrity. Data safety was implemented by the researcher by using a password-protected computer to store the acquired data set and enabled password protection on it. To ensure data recoverability, the researcher created a copy of the dataset and stored it on a password-protected external hard drive.

Validity of the Secondary Data Set

The validity of an instrument is the extent to which the data collected are applicable for the intended research objectives (Creswell & Guetterman, 2019). The validity of the secondary data set was evidenced in two ways. The first was measured by the extent to which the data to value is accurate and consistent. The computer-based programs used to compile the secondary data set allowed for validation techniques that restricted the type of data or values input into data cells to ensure accuracy and consistency (data reliability). These techniques were applied to the computer-based programs used by the OSPIE research team to produce the secondary data set for the present study.

The second way validity of the secondary dataset was assessed, like the primary data instrument, was through its content validity. Content validity relies on the expertise

of individuals who are familiar with the construct being measured (Content Validity: Definition, Index & Examples, 2015). While the researcher based their selection of variables on their extensive review of the literature on academic success and retention, the researcher followed the same procedure used for the primary data instrument to assess content validity for the secondary data set. The goal was to ensure the researcher adequately selected the variables that were included in the secondary data set.

Instrumentation for Primary Data

For the collection of primary data, an online self-administered survey (Appendix A) programmed in Qualtrics was sent to first-time, full-time students who were (1) placed on academic probation after completion of the Fall 2019, Fall 2020, or Fall 2021 semester, (2) completed the SCS:099—Strategies for Academic Success Course, (3) earned a minimum 2.0 cumulative GPA at the end of their second semester, and (4) returned for their second year of college at NC A&T State University in the Fall 2020 semester, Fall 2021 semester, or Fall 2022 semester, respectively. The survey was used to solicit their perceptions on the impact of the five main requirements of the SCS:099 Course on both their academic success and retention. These requirements include: (1) completion of a series of modules focused on student success, (2) attending a meeting with an academic advisor/coach within the student's academic college, (3) attending two student success webinars, (4) completion of a career assessment, and (5) completion of a student success profile. The researcher created a primary data set from the survey responses, using descriptive statistics, to determine which components of the course students perceived to have had the most impact on their academic success and retention.

The first part of the survey (Section 1) asked students to provide demographic information regarding their first-generation status, socioeconomic status, gender, SAT/ACT scores, high school GPA, ethnicity, semester in which they started their full-time matriculation at NC A&T State University, and semester in which they completed the SCS:099—Strategies for Academic Success Course. To determine if a student is considered a first-generation college student, a survey question sought to establish that neither of the respondent's parents completed a bachelor's degree. Similarly, to determine that a student is from low socioeconomic status, the survey sought to establish that the respondent is a Pell Grant recipient.

The second part of the survey (Section 2) asked students to evaluate their satisfaction with the five different areas of the course using the five-point satisfaction Likert scale (very dissatisfied, dissatisfied, neither dissatisfied nor satisfied, satisfied, very satisfied). The third part of the survey (Section 3) asked students whether these individual areas helped them improve their GPA (as a measure of academic success). The fourth part of the survey (Section 4) asked students whether these individual areas helped them return for their second year of college at NC A&T State University (as a measure of retention). Sections 3 and 4 used a five-point Likert scale (strongly disagree, disagree, neither dissatisfied nor satisfied, agree, and strongly agree).

Reliability of the Survey

Reliability is defined by the consistency of the scores yielded by an instrument, which results in the scores being nearly the same every time the instrument is employed (Creswell & Guetterman, 2019). To assess the reliability of the survey and its suitability for statistical analysis, the researcher applied Cronbach's alpha to measure the internal

consistency of the instrument. As noted by Warrens (2014), “alpha is the most commonly used coefficient for estimating reliability of a test score if there is only one test administration” (p. 4). Since the researcher only administered the survey once per student participant, applying Cronbach’s alpha to assess reliability of the survey was appropriate. In order for the survey to be considered reliable, an acceptable range for Cronbach alpha was 0.7-0.9, which was computed using SPSS for Mac version 28.

Validity of the Survey

Creswell and Guetterman (2019) note that validity is “. . . the degree to which all the evidence points to the intended interpretation of test scores for the proposed purpose” (p. 158). To assess the validity of the survey, the researcher assessed content validity, which is a non-statistical measure that relies on the assessment of the survey, by subject matter experts, to determine if the survey questions adequately measured the concepts they were intended to. To achieve this, the researcher invited three subject matter experts to assess the survey and provide their feedback on content validity. These subject matter experts included the Director of the Center for Academic Excellence (CAE) at NC A&T State University, the Director of Academic Recovery Services within CAE, and the Leadership Department Chair at Andrews University (which is serving as the content expert for this study). These individuals were selected due to their level of expertise in the areas of academic success and student retention.

Data Analysis

The (SPSS) version 28 for Mac was used to perform the data analyses. A chi-square test of independence was used to analyze Research Question 1. The chi-square test

of independence is used to determine if there was a statistically significant relationship between two categorical variables (Moran, 2021). More specifically, Research Question 1 examined the retention (variable of interest) of two groups—the intervention group and the control group. An Independent Samples *t* Test was used to analyze Research Question 2. The Independent Samples *t* Test was used to determine if there was a statistically significant difference between the means of two different groups based on a variable of interest (Kent State Libraries, 2021). Research question 2 examined the change in GPA (variable of interest) between the end of the first semester and the end of the second semester for two groups—the intervention group and the control group.

The null hypotheses for Research Questions 1 and 2 were tested at the .05 level of significance to determine if there were statistically significant differences between the groups based on retention and change in GPA between the first and second semester of students' first year. If a *p*-value less than or equal to .05 was observed for a null hypothesis, then the difference was considered statistically significant, and the null hypothesis was rejected.

A binary logistic regression was used to address question 3. A binary logistic regression “predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical” (Lærd Statistics, 2018). Research question 3 examined if there were differences between the retention rate (dichotomous, binary dependent variable) of students in the intervention group and students in the control group (independent variable) when controlling for high school GPA, gender, SAT/ACT scores, socioeconomic status, and first-generation status (control variables).

The null hypothesis for Research Question 3 was tested at the .05 level of significance to determine if there was a statistically significant relationship between the dichotomous dependent variable and independent variables. If a p -value less than or equal to .05 was observed for the null hypothesis, the researcher determined there was a statistically significant relationship between retention rate (dependent variable) and the students' classification as intervention or control group (independent variables) and the null hypothesis was rejected.

An ordinary least squares multiple regression was used to analyze question 4. An ordinary least squares multiple regression (or linear regression) was used to estimate the relationship between one or more independent variables and a dependent variable ("Ordinary least squares regression", n.d.). Research question 4 examined the relationship between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The change in GPA (first semester to second semester) was the dependent variable, the students' classification as intervention or control group were the independent variables), and high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status were the control variables.

The null hypotheses for Research Question 4 was tested at the .05 level of significance to determine if there is a statistically significant relationship between the change in GPA between the first semester to second semester (dependent variable) and the students' classification as intervention or control group (independent variables). If a p -value less than or equal to .05 was observed for the null hypothesis, the researcher

determined there was a statistically significant relationship between the dependent variable and the independent variables, and the null hypothesis was rejected.

Research Questions 5 and 6 were descriptive in nature and as such had no hypothesis to be empirically tested. The researcher examined the survey responses using descriptive statistics, which allows the data to be presented in a meaningful way that facilitates simpler interpretation of such (Lærd Statistics, 2018). For survey section 2 (see Appendix A), the researcher assigned numbers to the different response options presented in the format of a 5-point Likert scale as follows: 1-very dissatisfied, 2-dissatisfied, 3-neither satisfied nor dissatisfied, 4-satisfied, and 5-very satisfied. For survey sections 3 and 4, the researcher assigned numbers to the different response options presented in the format of a 5-point Likert scale as follows: 1=*strongly disagree*, 2=*disagree*, 3=*neither agree nor disagree*, 4=*agree*, and 5=*strongly agree*.

The researcher used the assigned numbers to derive the mean response for each survey item. The items were then ranked by their means to determine which components of the SCS:099 Course students perceived to have had the most impact on their academic success (improved GPA) and retention. A factor analysis with principal component analysis was conducted to assess which components of the course students perceived to be most important. Factor analysis is useful when condensing a large data set, and principal component analysis is used to "reduce the dimensionality of such datasets, increasing interpretability but at the same time minimizing information loss. It does so by creating new uncorrelated variables that successively maximize variance" (Jolliffe & Cadima, 2016, p. 1).

Summary

This chapter provided an overview of the methodology used in this study. It (1) restated the purpose of the study, (2) presented the study's research design, (3) restated the research questions, (4) introduced the null hypotheses, (5) restated definition of variables, (6) stated the population and sample, (7) stated the data collection methods used, (8) stated the instrumentation used and their reliability and validity, and (9) concluded with a description of how the data were analyzed. In summary, this chapter described the methods that were used in this study. This study used an ex post facto research design to examine the relationship between a student success course (independent variable) and the academic success and retention (dependent variables) of first-year students at a Historically Black University. Statistically significant differences between two groups were examined—the intervention group and the control group. The data analyses and results of this study are discussed in Chapter 4, and a summary—implications related to the research questions and future research—are discussed in Chapter 5.

CHAPTER 4

DATA ANALYSIS AND RESULTS

This chapter presents the analyses and results of the data collected in a non-experimental, quantitative ex post facto, causal comparative study that examined the relationship between a student success course (independent variable) and the academic success and retention (dependent variables) of first-year students at a Historically Black University. The results are presented in six parts: (1) research questions restated, (2) null hypotheses restated, (3) overview of variables included in this study, (4) population and sample demographics, (5) data collection and instrumentation overview, and (6) data analyses of the null hypotheses and corresponding results. This chapter will conclude with a summary on the data analyses and results of this study.

Research Questions Restated

The research questions guiding this study were:

1. Is there a difference between the retention rate of the intervention group and that of the control group?
2. Is there a difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group?

3. Are there differences between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
4. Are there differences between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
5. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their academic success (improved GPA)?
6. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their retention?

Null Hypotheses Restated

1. There is no significant difference between the retention rate of the intervention group and that of the control group.
2. There is no significant difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group.
3. There is no difference between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.
4. There is no difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group

when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

Variables

In this study, participation in a student success course was the independent variable, and academic success and retention were the dependent variables. Quantitative variables were examined, including completion of the SCS:099—Strategies for Academic Success Course, high school GPA, SAT/ACT scores, first-year first and second semester GPA, and retention rate. Categorical variables were also examined, including academic standing, gender, socioeconomic status, and first-generation status.

Population and Sample Demographics

Secondary Dataset

The sample for this study was comprised of 1,464 first-year students attending a Southeastern HBCU (with a population of over 13,000 students) who were placed on academic probation after completion of their first semester of college—Fall 2019, Fall 2020, or Fall 2021. This includes a total of 332 students enrolled in the Fall 2019 term (22.67%), 422 students enrolled in the Fall 2020 term (28.82%), and 710 students enrolled in the Fall 2021 term (48.49%). All students included in this sample earned less than a 2.0 GPA in their first semester. Their average high school weighted GPA was a 3.33. Of the 589 students in this sample that submitted SAT scores, the average score was a 1011 out of 1600. Of the 745 students in this sample who submitted ACT scores, the average score was an 18 out of 36.

Gender demographics revealed that 794 students (54.23% of the sample) are female, while 670 students (45.77% of the sample) are male. Of the 1,464 students included in this secondary dataset, 159 (10.86%) were Pell Grant recipients, which was the criterion used to identify students from low socioeconomic status, given the low-income requirements to be deemed eligible to receive this type of financial aid. Federal Pell Grants are offered to undergraduate students who are from low-income households (U.S. Department of Education, n.d.). Conversely, of the 1,464 students included in this secondary dataset, 1,305 (89.14%) of students were not considered to have been from low socioeconomic status given they were not Pell Grant recipients.

Pertaining to first-generation status, there were several categories students self-identify as upon matriculating into the institution. The criterion to determine first-generation status is whether one or both parents, or one or both legal guardians, completed a college degree. Of the 1,464 students included in the secondary dataset, there are six categories students have been organized by pertaining to their self-disclosed first-generation status. These categories include (1) did not answer, (2) no, (3) probable, (4) unknown, (5) yes, and (6) blank. A total of 14 students did not answer, 31 students' statuses were unknown, and 16 students' statuses were blank. Between these three categories, a total of 61 (4.16%) students' first-generation status was unknown. Of the 1,403 students who did have reported information, 904 are not considered first-generation college students. This accounts for 61.74% of the 1,464 students included in the secondary dataset. Furthermore, 135 students (9.22%) were categorized as probable first-generation college students, and the remaining 364 (24.86%) identified as first-generation college students.

Primary Dataset

Of the 1,464 students included in this sample, the online self-administered survey was deployed to the 176 students on academic probation who successfully completed the required student success course in the subsequent Spring 2020, Spring 2021, and Spring 2022 terms, respectively, and achieved a 2.0 GPA or higher for their second term GPA. Successful completion of the course requires that students pass with at least an 80% overall score for the course. Of the 176 students invited to complete the survey, a total of 44 students participated in completing the survey.

Of the 44 survey participants, 34 respondents (77.27%) were female, 9 (20.45%) were male, and 1 (2.27%) did not provide a response. With regard to race and ethnicity, 42 (95.45%) identified as African American/Black and 1 (2.27%) identified as Hispanic/Latino, and 1 did not respond (2.27%). A total of 7 respondents (15.9%) matriculated in the Fall 2019 term, 9 (20.45%) matriculated in the Fall 2020 term, 27 (61.36%) matriculated in the Fall 2021 term, and 1 respondent (2.27%) did not provide a response. Eleven respondents (25%) indicated they completed the student success course in the Spring 2020 term, 13 respondents (29.55%) indicated they completed the course in the Spring 2021 term, 18 respondents (40.9%) indicated they completed the course in the Spring 2022 term, and 2 (4.54%) did not provide a response.

Additionally, 22 respondents (50%) indicated that no parent/legal guardian completed a college degree, qualifying the respondents as first-generation college students. Conversely, 21 respondents (47.73%) indicated at least one parent/legal guardian completed a bachelor's degree, and 1 respondent (2.27%) did not provide a response. With regard to socioeconomic status, 25 respondents (56.82%) indicated they

were Pell Grant recipients, which was the criterion used to determine whether a student is of low socioeconomic status. Of the 44 survey participants, 18 (40.9%) indicated they were not Pell Grant recipients, and 1 (2.27%) did not provide a response.

Lastly, related to academic performance, 11 students (44%) indicated they completed the ACT. The average score for the 11 respondents was a 20.45 out of 36 possible points. Similarly, 11 (44%) students indicated they completed the SAT. The average score these 11 respondents was a 1032.27 out of 1600 points. Related to high school weighted GPA, 39 (88.64%) out of 44 respondents provided a response. The average self-reported high school GPA was a 3.57.

Data Collection and Instrumentation Overview

Institutional Review Board (IRB) approval was secured for secondary data and primary data collection procedures from both Andrews University and North Carolina A&T State University. Secondary data were obtained from the Analytics Division of the OSPIE at NC A&T State University on students in the control group, which is comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, and (3) did not complete the SCS:099—Strategies for Academic Success Course in the second semester of their first year. These data were obtained in the form of a secondary data set. This secondary data set included information on their first-time, full-time status, academic standing, enrollment in the SCS:099—Strategies for Academic Success Course in their second semester of their first year, high school GPA, SAT/ACT scores, first-semester GPA, second-semester GPA,

gender, first-generation status, socioeconomic status, and second-year enrollment (as a measure of retention).

Once IRB approval was obtained, primary data were collected via an online survey created by the researcher and programmed in Qualtrics (Appendix A). An email including an informed consent and invitation to participate in the study was sent by the researcher to students in the intervention group via their NC A&T State University email. The email was sent to students in the intervention group who (1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, (3) completed the SCS:099—Strategies for Academic Success Course in the second semester of their first year, (4) improved their GPA by the end of the second semester of their first year, and (5) continued their enrollment into the first semester of their second year (retention).

Data Analyses and Results

Secondary Data Analyses and Results

Null Hypothesis 1: There is no significant difference between the retention rate of the intervention group and that of the control group.

To test this null hypothesis, a chi-square test of independence was used to analyze Research Question 1. The chi-square test of independence was used to determine if there was a statistically significant relationship between the retention (dependent variable) of two groups—the intervention group and the control group (independent, categorical variables). The intervention group was comprised of first-year students on academic

probation who completed the student success course, while the control group was comprised of first-year students on academic probation who did not complete the student success course. The intervention group was comprised of students who (1) enrolled as first-time, full-time students in the Fall 2019, Fall 2020, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, (3) completed the SCS:099—Strategies for Academic Success Course in the second semester of their first year. The control group was comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, and (3) did not complete the SCS:099—Strategies for Academic Success Course in the second semester of their first year.

The relationship between these variables was significant, $\chi^2 (1, N = 1464) = 199.712^a$, $p = .001$ (Table 1). The students who completed the course (intervention group) were more likely to be retained than those who did not complete the course (control group) (Table 2). The null hypothesis was rejected. Students who completed the course were retained at a 59% rate, while students who did not complete the course were retained at a 22% rate (Table 3). The retention rate of those students who completed the course was 37% higher than those who did not complete the course. This suggests that completing the SCS:099—Strategies for Academic Success Course is associated with a higher likelihood of retention. Table 3 presents descriptive statistics on the difference in retention rate for both groups.

Table 1*Chi-Square Tests*

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	199.712 ^a	1	<.001		
Continuity Correction ^b	198.088	1	<.001		
Likelihood Ratio	197.348	1	<.001		
Fisher's Exact Test				<.001	<.001
N of Valid Cases	1464				

Note.

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 177.31.

b. Computed only for a 2x2 table.

Table 2*Cross Tabulation of Student Success Course Completed and Retention*

SCS099 Course Completed	Retained		Total
	N	Y	
No (Control Group)	745	212	957
Yes (Intervention Group)	207	300	507
Total	952	512	1464

Table 3*Descriptive Statistics: Retention Rate*

SCS099 Course Completed	Retention Rate
No (Control Group)	22%
Yes (Intervention Group)	59%

Null Hypothesis 2: There is no significant difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group.

To test this null hypothesis, an independent samples *t*-test was used to analyze Research Question 2. The independent samples *t*-test was used to examine if there was statistical difference between the change in first-year GPA (first-semester to second-semester GPA) of the intervention and that of the control group. For this null hypothesis, the intervention group and the control group were treated as independent variables. The change in GPA between the first semester and second semester was treated as the dependent variable. Table 4 notes the average first-term GPA for the control group and the intervention group, respectively. Table 5 notes the average second-term GPA for the control group and the intervention group, respectively. Students who did not return their second semester (264 in total) were excluded from the second-term average GPA calculation for both groups, which resulted in 693 students in the control group. For the control group, the mean difference between first-to-second term GPA was .16 with a standard deviation of .58 (see Table 6). For the intervention group, the mean difference between first-to-second term GPA was .55 with a standard deviation of .64. An independent samples *t*-test was conducted to compare the difference in first-to-second term GPA for both groups. The *t*-statistic was -10.926 , with $df = 1198$ ($p < .001$) (see Table 7). The effect size for the difference between the groups was calculated using Cohen's *d*, resulting in a value of .608, which is considered medium effect (see Table 8).

The results of this independent samples *t*-test indicate there is a statistically significant difference between the mean difference in first-to-second term GPA of the

control group and the intervention group. The null hypothesis was rejected. These results suggest that completing the SCS:099—Strategies for Academic Success Course has a significant impact on improving first-to-second term GPA (academic performance).

Table 4

Means for the First-Term GPA for Control Group and Intervention Group

First-Term GPA	Mean	<i>SD</i>	<i>N</i>
Control Group	0.97	0.67	693
Intervention Group	1.18	0.59	507

Table 5

Means for the Second-Term GPA for Control Group and Intervention Group

Second Term GPA	Mean	<i>SD</i>	<i>N</i>
Control Group	1.13	0.80	693
Intervention Group	1.73	0.73	507

Table 6

Group Statistics

Difference in First-to-Second Term GPA	Mean	<i>SD</i>	<i>N</i>
Control Group	.16	0.58	693
Intervention Group	.55	0.64	507

Table 7*Independent Sample t Test for Difference in First-to-Second Term GPA*

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means		
		<i>F</i>	Sig.	<i>t</i>	<i>df</i>	Sig.
Difference in First- to- Second Term GPA	Equal variances assumed	4.722	.030	-10.926	1198	<.001
	Equal variances not assumed			-10.759	1025.110	<.001

Table 8*Independent Samples Effect Sizes*

		Standardizer	Point Estimate	95% Confidence Interval	
				Lower	Upper
Difference in First- to-Second Term GPA	Cohen's d	.608	-.639	-.756	-.521

Null Hypothesis 3: There is no significant difference between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

To test this null hypothesis, a binary logistic regression was used to examine Research Question 3. A binary logistic regression was used to determine if there were differences between the retention (dichotomous, binary dependent variable) of students in the intervention group and that of the control group when controlling for high school

GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The retention rate is the dependent variable, the students' classification as intervention or control group are the independent variables, and high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status are the control variables. The Omnibus tests of model coefficients demonstrated the logistic regression model was statistically significant, $\chi^2(10) = 61.200$, $p < .001$ (Table 9). The model explained 29.6% of the variance retention (Table 10) and correctly classified 71.1% of cases (Table 11).

Table 9
Omnibus Tests of Model Coefficients

	Chi-square	<i>df</i>	Sig
Step	61.200	10	<.001
Block	61.200	10	<.001
Model	61.200	10	<.001

Table 10

Model Summary

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	273.296 ^a	.220	.296

Note. a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 11*Classification Table*

Observed		Retained-No	Retained-Yes	Percentage Correct
Retained	N	107	36	74.8
	Y	35	68	66.0
Overall Percentage				71.1

Note.

The cut value is .500.

The results of this binary logistic regression indicate there is a statistically significant difference between the retention rate of the intervention group and that of the control when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The null hypothesis was rejected. Table 12 lists the variables in the model and their relationship to retention (dependent variable). The strongest predictors of retention were completion of the SCS:099—Strategies for Academic Success Course ($p < .001$), low socioeconomic status ($p = .002$), high school GPA ($p = .006$), and first-generation status ($p = .013$).

Table 12*Variables in the Equation*

	B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I. for EXP (B)	
							Lower	Upper
High school GPA (weighted)	1.116	.408	7.484	1	.006	.175	.095	.321
SAT Score	.002	.002	.708	1	.400	1.002	.998	1.005
ACT Score	-.025	.002	.148	1	.700	.976	.861	1.105
Gender (1)	-.146	.306	.229	1	.632	.864	.474	1.573
Low Socioeconomic Status (Pell) (1)	1.657	.539	9.437	1	.002	5.243	1.822	15.091
First-Generation Status			6.983	4	.137			
First-Generation Status (1)	2.936	1.180	6.194	1	.013	18.843	1.866	190.268
First-Generation Status (2)	.450	.350	1.653	1	.199	1.568	.790	3.115
First-Generation Status (3)	.067	.634	.011	1	.916	1.069	.309	3.706
First-Generation Status (4)	.200	1.129	.031	1	.859	1.222	.134	11.157
SCS099 Course Completed	-1.744	.309	31.791	1	<.001	.175	.095	.321
Constant	-6.078	1.870	10.563	1	.001	.002		

Note.

Variables entered on Step 1: High school GPA (weighted), SAT Score, ACT Score, Gender, Low Socioeconomic Status (Pell), First-Generation Status, SCS099 Course Completed.

The results indicate that completing the SCS:099—Strategies for Academic Success Course was a stronger predictor of retention ($p < .001$) than the control variables.

The students who completed the course (intervention group) were more likely to be retained than those who did not complete the course (control group) (Table 2). Students who completed the course were retained at a 59% rate, while students who did not complete the course were retained at a 22% rate. The retention rate of those students who completed the course was 37% higher than those who did not complete the course. Table 3 represents descriptive statistics on the difference in retention rate for both groups.

Low socioeconomic status had a statistically significant impact ($p = .002$) in the difference in retention rate between students in the intervention group and the control group, respectively. Students of low socioeconomic status in the control group were less likely to be retained than those students in the control group who were not of low socioeconomic status (Table 13). Students of low socioeconomic status in the control group were retained at a 9% rate, while those who were not of low socioeconomic status were retained at a 24% rate (Table 14). The retention rate of students in the control group who were not of low socioeconomic status was 15% higher than those students in the control group who were of low socioeconomic status. These findings suggest that students of low socioeconomic status are less likely to be retained than those who are not of low socioeconomic status. Table 14 represents descriptive statistics of the difference in retention rate for both groups.

Students of low socioeconomic status in the intervention group were less likely to be retained than those students in the intervention group who were not of low socioeconomic status (Table 15). Students of low socioeconomic status in the intervention group were retained at a 41 % rate, while those who were not of low socioeconomic status were retained at a 61% rate (Table 16). The retention rate of

students in the control group who were not of low socioeconomic status was 20% higher than those students in the control group who were of low socioeconomic status. These findings suggest that students of low socioeconomic status are less likely to be retained than those who are not of low socioeconomic status. Table 16 represents descriptive statistics of the difference in retention rate for both groups.

Table 13

Cross Tabulation of Low Socioeconomic Status and Retention- Control Group

Low Socioeconomic Status	Retained		Total
	N	Y	
No	647	202	849
Yes	98	10	108
Total			957

Table 14

Descriptive Statistics: Retention Rate of Low Socioeconomic Status- Control Group

Low Socioeconomic Status	Retention Rate
No	24%
Yes	9%

Table 15*Cross Tabulation of Low Socioeconomic Status and Retention- Intervention Group*

Low Socioeconomic Status	Retained		Total
	N	Y	
No	177	279	456
Yes	30	21	51
Total			507

Table 16*Descriptive Statistics: Retention Rate of Low Socioeconomic Status- Intervention Group*

Low Socioeconomic Status	Retention Rate
No	61%
Yes	41%

High school GPA had a statistically significant impact ($p = .006$) in the difference in retention rate between students in the intervention group and the control group, respectively. Students who completed the course (intervention group) were retained at a 59% rate (Table 3) and had an average 3.35 high school GPA (Table 17). Students who did not complete the course (control group) were retained at a 22% (Table 3) and had an average 3.43 high school GPA (Table 18). Students who were retained had a mean high school GPA .08 points higher (on a 4.0 weighted scale) than those who were not retained (Table 19). While the practical significance of the difference in GPA appears relatively small in the context of retention, the statistical significance of these findings suggest high school GPA is a strong predictor of retention.

Table 17*Means for High School GPA and Retention- Intervention Group*

High School GPA	Mean	<i>SD</i>	<i>N</i>
Not Retained	3.27	.41	207
Retained	3.35	.41	300
Total	3.32	.41	507

Table 18*Means for High School GPA and Retention- Control Group*

High School GPA	Mean	<i>SD</i>	<i>N</i>
Not Retained	3.31	.43	744
Retained	3.43	.42	212
Total	3.34	.43	956

Table 19*Means for High School GPA and Retention*

High School GPA	Mean	<i>SD</i>	<i>N</i>
Not Retained	3.30	.42	951
Retained	3.38	.42	512
Total	3.33	.42	1463

First-generation status had a statistically significant impact ($p = .013$) in the difference in retention rate between students in the intervention group and the control group, respectively. Students of first-generation status in the control group were less likely to be retained than those students in the control group who were not of first-generation status (Table 20). Students of first-generation status in the control group were retained at an 18 % rate, while those who were not of first-generation status were retained at a 24% rate (Table 21). The retention rate of students in the control group who were not of first-generation status was 6% higher than those students in the control group who were of first-generation status. These findings suggest that students of first-generation status are less likely to be retained than those who are not of first-generation status. Table 21 represents descriptive statistics of the difference in retention rate for both groups.

Students of first-generation status in the intervention group were less likely to be retained than those students in the intervention group who were not of first-generation status (Table 22). Students of first-generation status in the intervention group were retained at a 61 % rate, while those who were not of first-generation status were retained at 56% rate (Table 23). The retention rate of students in the intervention group who were not of first-generation status was 5% higher than those students in the intervention group who were of first-generation status. These findings suggest that students of first-generation status are less likely to be retained than those who are not of first-generation status. Table 23 represents descriptive statistics of the difference in retention rate for both groups.

Table 20*Cross Tabulation of First-Generation Status and Retention- Control Group*

First-Generation Status	Retained		Total
	N	Y	
No	449	138	587
Yes	203	45	248
Total			835

Table 21*Descriptive Statistics: Retention Rate of First-Generation Status Students- Control Group*

First-Generation Status	Retention Rate
No	24%
Yes	18%

Table 22*Cross Tabulation of First-Generation Status and Retention- Intervention Group*

First-Generation Status	Retained		Total
	N	Y	
No	122	194	316
Yes	51	65	116
Total			432

Table 23

Descriptive Statistics: Retention Rate of First-Generation Status Students- Intervention Group

First-Generation Status	Retention Rate
No	61%
Yes	56%

Null Hypothesis 4. There is no difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

To test the null hypothesis, an ordinary least squares multiple regression was used to analyze Research Question 4. An ordinary least squares multiple regression was used to examine the relationship between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. The change in GPA (first semester to second semester) is the dependent variable, the students' classification as intervention or control group are the independent variables, and high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status are the control variables.

The results of the ordinary least squares multiple regression indicate there is a statistically significant difference between the change in first-year GPA (first-to-second term GPA) of the intervention group and that of the control group when controlling for

high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. Table 11 reflects the statistical significance of the control variables in relation to change in first-year GPA (first-to-second term GPA) of the intervention group and that of the control group, $F(9, 200) = 4.087, p < .001, R^2 = .155$ (Table 24, Table 25). The null hypothesis was rejected. Table 26 lists the variables in the model and their relationship to the change in first-year GPA (first-to-second term GPA). The strongest predictors of the difference between change in first-year GPA (first-to-second term GPA) of the intervention group and that of the control group were completion of the SCS:099—Strategies for Academic Success Course ($p < .001$), low socioeconomic status ($p = .020$), and high school GPA ($p = .026$).

Table 24

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.394a	.155	.117	.638

Table 25

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	14.961	9	1.662	4.087	<.001 ^a
Residual	81.347	200	.407		
Total	96.307	209			

Note. Dependent variable: difference in first-to-second term GPA.

a. Predictors: (constant), first-generation status=yes, high school GPA (weighted)=yes, SCS099 course completed, first-generation status=probable, low socioeconomic status Pell= Y, Gender=F, ACT score, SAT score, first-generation status=No.

Table 26*Coefficients*

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	<i>t</i>	Sig.
(Constant)	-.559	.515		-1.086	.279
SCS099 Course Completed	.347	.092	.254	3.768	<.001
High school GPA (weighted)	.266	.118	.158	2.246	.026
SAT Score	.000	.001	.032	.338	.735
ACT Score	-.018	.018	-.092	-1.006	.315
Gender = F	.105	.092	.077	1.148	.253
Low Socioeconomic Status Pell = Y	-.321	.137	-.156	-2.352	.020
First-Generation Status = No	-.008	.251	-.006	-.033	.974
First-Generation Status = Probable	-.181	.291	-.071	-.623	.534
First-Generation Status = Yes	.050	.259	.033	.193	.847

The results indicate that completing the SCS:099—Strategies for Academic Success Course was a stronger predictor of change in first-year GPA (first-to-second term GPA) ($p < .001$) than the control variables. Table 4 notes the average first-term GPA for the control group and the intervention group, respectively. Table 5 notes the average second term GPA for the control group and the intervention group, respectively. Students who did not return their second semester (264 in total) were excluded from the second term average GPA calculation for both groups, which resulted in 693 students in the

control group. For the control group, the mean difference between first-to-second term GPA was .16 with a standard deviation of .58 (see Table 6). For the intervention group, the mean difference between first-to-second term GPA was .55 with a standard deviation of .64. These results suggest that completing the SCS:099—Strategies for Academic Success Course has a significant impact on improving first-to-second term GPA (academic performance).

Low socioeconomic status had a significant impact on the change in first-year GPA (first-to-second term GPA) ($p = .020$). Table 27 notes the average first-term GPA of students in the control based on low socioeconomic status, with ‘Y’ indicating students of low socioeconomic status and ‘N’ indicating students who are not of low socioeconomic status. Table 28 notes the average second term GPA of students in the control group based on low socioeconomic status, with ‘Y’ indicating students of low socioeconomic status and ‘N’ indicating students who are not of low socioeconomic status. For the students in the control group who were of low socioeconomic status, the mean difference between first-to-second term GPA was a .00, with a standard deviation of .78 (Table 29). For the students in the control group who were not of low socioeconomic status, the mean difference between first-to-second term GPA was a .17, with a standard deviation of .59 (Table 29).

These findings suggest that students’ socioeconomic status has a significant impact on students’ first-to-second term GPA (academic performance). These findings indicate that students of low socioeconomic status are likely not to experience a change in their GPA, which has negative implications for students who may already be academically underperforming (as evidenced by GPA). The findings suggest that students

who are not of low socioeconomic status are more likely to experience an improvement in their first-to-second term GPA (academic performance).

Table 27

Means for the First-Term GPA and Low Socioeconomic Status of Control Group

First-Term GPA	Mean	SD	N
Low Socioeconomic Status (Y)	0.86	0.67	61
Low Socioeconomic Status (N)	0.98	0.67	632

Table 28

Means for the Second Term GPA and Low Socioeconomic Status of Control Group

Second Term GPA	Mean	SD	N
Low Socioeconomic Status (Y)	0.86	0.67	61
Low Socioeconomic Status (N)	1.15	0.81	632

Table 29

Group Statistics of Low Socioeconomic Status and Control Group

Difference in First-to-Second Term GPA	Mean	SD	N
Low Socioeconomic Status (Y)	.00	0.78	61
Low Socioeconomic Status (N)	.18	0.59	632

High school GPA had a significant impact on the change in first-year GPA (first-to-second term GPA) ($p = .026$). Students in the control group had a .16 increase to their GPA with a standard deviation of .58 (Table 6) and an average 3.34 high school GPA (Table 18). Students in the intervention group had a .55 increase to their GPA with a standard deviation of .64 (Table 6) and an average 3.32 high school GPA (Table 17). While the practical significance of the average high school GPA and its relationship to first-year GPA appears relatively small in the context of academic performance, the statistical significance of these findings suggests high school GPA is a strong predictor of change in first-year GPA. More specifically, the students in the intervention group who experienced a greater change (improvement) to their first-year GPA had a slightly lower average high school GPA (3.32) than those students in the control group who had a higher average high school GPA (3.34). This suggests those students with lower average high school GPA are more likely to experience a higher change in first-year GPA (academic performance improvement) than those who have a higher average high school GPA who may be performing closer to their demonstrated academic potential.

Primary Data Analysis and Results

For the collection of primary data, an online self-administered survey (Appendix A) was offered to students in the control group. The control group was comprised of first-time, full-time students who were (1) placed on academic probation after completion of the Fall 2019, Fall 2020, or Fall 2021 semester, (2) completed the SCS:099—Strategies for Academic Success Course, (3) earned a minimum 2.0 cumulative GPA at the end of

their second semester, and (4) returned for their second year of college at NC A&T State University in the Fall 2020, Fall 2021, or Fall 2022 semester, respectively.

In the first section of the survey, participants were asked to provide demographic information regarding their first-generation status, socioeconomic status, gender, SAT/ACT scores, high school GPA, ethnicity, semester in which they started their full-time matriculation at NC A&T State University (Fall 2019, Fall 2020, or Fall 2021), and semester in which they completed the SCS:099—Strategies for Academic Success Course (Spring 2020, Spring 2021, Spring 2022). Descriptive statistics are presented in Tables 30-31. The data collected demonstrate 44 students participated in the survey. Of those 44 students, 21 were first-generation college students, and 25 were from low socioeconomic status. The respondents were also categorized by gender: 34 females and 9 males completed the survey, and one respondent did not select either gender. One participant was of Hispanic/Latino ethnicity and 43 were African American/Black.

Table 30

Descriptive Statistics: First-Generation Status, Low Socioeconomic Status, Gender, Ethnicity, Race, Semester of Matriculation, Semester of Academic Success Course Completion

Characteristic	Response	Frequency	Percent	Valid Percent	Cumulative Percent
First-Generation Status	No Response	1	2.3	2.3	2.3
	No	22	50.0	50.0	52.3
	Yes	21	47.7	47.7	100.0
	Total	44	100.0	100.0	
Low Socioeconomic Status	No Response	1	2.3	2.3	2.3
	No	18	40.9	40.9	43.2
	Yes	25	56.8	56.8	100.0
	Total	44	100.0	100.0	
Gender	No Response	1	2.3	2.3	2.3
	Female	34	77.3	77.3	79.5
	Male	9	20.5	20.5	100.0
	Total	44	100.0	100.0	
Ethnicity Hispanic/ Latino	No Response	1	2.3	2.3	2.3
	No	42	95.5	95.5	97.7
	Yes	1	2.3	2.3	100.0
	Total	44	100.0	100.0	
Race	No Response	1	2.3	2.3	2.3
	African American/Black	43	97.7	97.7	100.0
	Total	44	100.0	100.0	
Semester of Matriculation	No Response	1	2.3	2.3	2.3
	Fall 2019	7	15.9	15.9	18.2
	Fall 2020	9	20.5	20.5	38.6
	Fall 2021	27	61.4	61.4	100.0
	Total	44	100.0	100.0	
Semester of Academic Success Course Completion	No Response	2	4.5	4.5	4.5
	Spring 2020	11	25.0	25.0	29.5
	Spring 2021	13	29.5	29.5	59.1
	Spring 2022	18	40.9	40.9	100.0
	Total	44	100.0	100.0	100.0

Note.

First-generation status: determined by whether participant answered ‘no’ to whether either parents/legal guardian completed a bachelor’s degree. Low socioeconomic status: determined by whether participant answered ‘yes’ to whether they are a Pell Grant recipient.

Table 31*Descriptive Statistics: SAT/ACT Scores, High School GPA*

	<i>N</i>	Range	Minimum	Maximum	Mean	Std. Deviation
ACT Score	11	12	14	26	20.45	3.297
SAT Score	11	310	880	1190	1032.27	114.834
High School GPA	39	2	2	4	3.57	.447
Missing Responses	4					
Total	40					

Section 2 of the survey asked students to evaluate their satisfaction with the five different areas (requirements) of the course, to which the researcher assigned numbers in the form of a 5-point satisfaction Likert scale as follows: 1 = *very dissatisfied*, 2 = *dissatisfied*, 3 = *neither dissatisfied nor satisfied*, 4 = *satisfied*, or 5 = *very satisfied*. Results are presented in Tables 32 and 33.

Table 32*Means: Satisfaction with Course Requirements*

Requirement	<i>N</i>	Range	Min	Max	<i>M</i>	<i>SD</i>
Student Success Modules	35	3	2	5	4.14	0.866
Academic Advisor Meeting	35	3	2	5	4.2	0.785
Student Success Webinars	35	2	2	4	2.22	0.72
Career Assessment	35	4	1	5	4.02	0.97
Student Success Profile	35	3	2	5	4.02	0.877
Missing Responses	9					
Total	35					

Table 33*Descriptive Statistics: Satisfaction with Course Requirements*

Course Requirement	Response	Frequency	Percent	Valid Percent	Cumulative Percent
Student Success Modules	No Response	9	20.5	20.5	20.5
	1=Very Dissatisfied	0	0	0	0
	2=Dissatisfied	1	2.3	2.3	22.7
	3=Neither Satisfied nor Dissatisfied	8	18.2	18.2	40.9
	4=Satisfied	11	25.0	25.0	65.9
	5=Very Satisfied	15	34.1	34.1	100.0
	Total	44	100.0	100.0	
	Academic Advisor Meeting	No Response	9	20.5	20.5
1=Very Dissatisfied		0	0	0	0
2=Dissatisfied		1	2.3	2.3	22.7
3=Neither Satisfied nor Dissatisfied		5	11.4	11.4	34.1
4=Satisfied		15	34.1	34.1	68.2
5=Very Satisfied		14	31.8	31.8	100.0
Total		44	100.0	100.0	
Student Success Webinars		No Response	9	20.5	20.5
	1=Very Dissatisfied	0	0	0	0
	2=Dissatisfied	0	0	0	0
	3=Neither Satisfied nor Dissatisfied	6	13.6	13.6	34.1
	4=Satisfied	15	34.1	34.1	68.2
	5=Very Satisfied	14	31.8	31.8	100.0
	Total	44	100.0	100.0	

Table 33—Continued

Course Requirement	Response	Frequency	Percent	Valid Percent	Cumulative Percent
Career Assessment	No Response	9	20.5	20.5	20.5
	2=Dissatisfied	1	2.3	2.3	22.7
	3=Neither Satisfied nor Dissatisfied	7	15.9	15.9	38.6
	4=Satisfied	13	29.5	29.5	68.2
	1=Very Dissatisfied	1	2.3	2.3	70.5
	5=Very Satisfied	13	29.5	29.5	100.0
	Total	44	100.0	100.0	
	Student Success Profile	No Response	9	20.5	20.5
1=Very Dissatisfied		0	0	0	0
2=Dissatisfied		2	4.5	4.5	25.0
3=Neither Satisfied nor Dissatisfied		7	15.9	15.9	40.9
4=Satisfied		14	31.8	31.8	72.7
5=Very Satisfied		12	27.3	27.3	100.0
Total		44	100.0	100.0	

The third part of the survey (Section 3) informs Research Questions 5 and 6. Research Question 5 sought to understand which components of the SCS:099 Course students in the intervention group perceive to have had the most impact on their academic success (improved GPA). Numbers were assigned to different response options presented in the format of a 5-point Likert scale as follows: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree. The assigned numbers were used to derive the mean response for each survey item in Research Question 5 as demonstrated in Table 34. Higher scores indicate higher rates of agreement.

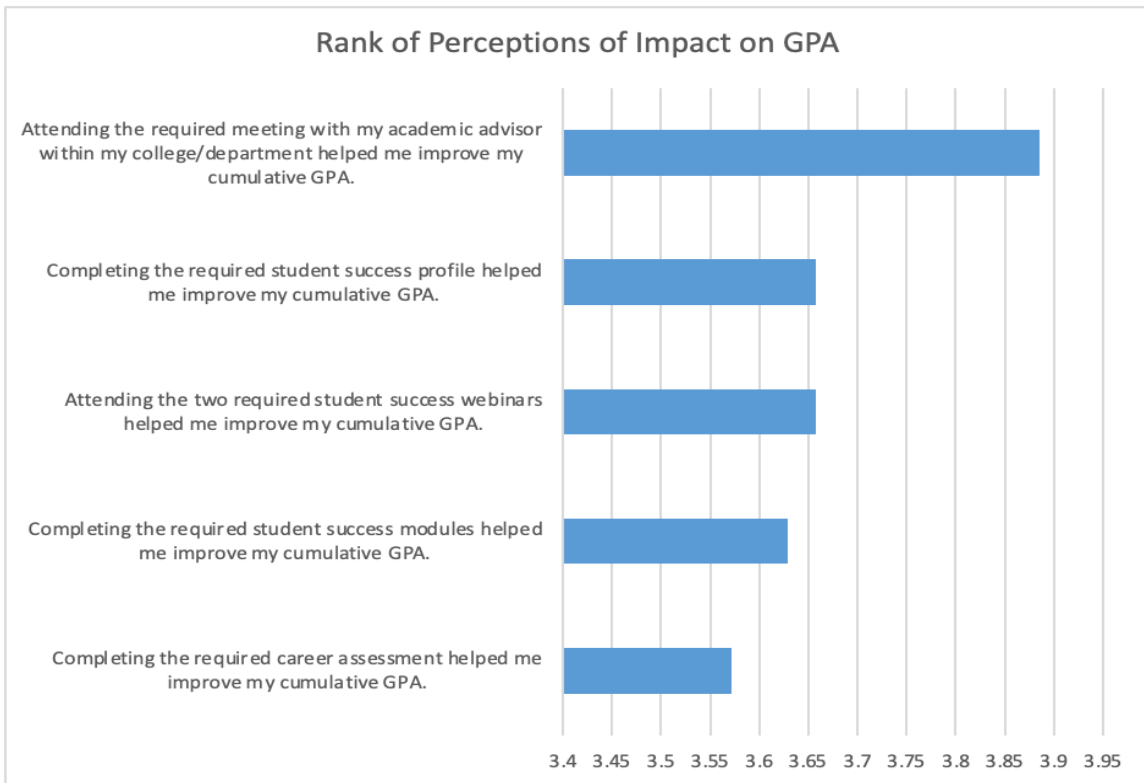
Table 34*Perceptions of Impact of SCS:099 Course on GPA*

Statement	<i>N</i>	<i>M</i>	<i>SD</i>
Completing the required student success modules helped me improve my cumulative GPA.	35	3.63	1.14
Attending the required meeting with my academic advisor within my college/department helped me improve my cumulative GPA.	35	3.89	.87
Attending the two required student success webinars helped me improve my cumulative GPA.	35	3.66	1.08
Completing the required career assessment helped me improve my cumulative GPA.	35	3.57	1.17
Completing the required student success profile helped me improve my cumulative GPA.	35	3.66	1.12

In response to Research Question 5, of the five components of the SCS:099 Course, respondents perceived attending the required meeting with their academic advisor within their college/department as having been the most helpful in improving their cumulative GPA (Figure 3).

Figure 3

Rank of Agreement with Statements on Impact of SCS:099 Course on GPA



Research Question 6 sought to understand which components of the SCS:099 Course students in the intervention group perceive to have had the most impact on their retention. Numbers were assigned to different response options presented in the format of a 5-point Likert scale as follows: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree. The assigned numbers were used to derive the mean response for each survey item in question 6 as demonstrated in Table 35.

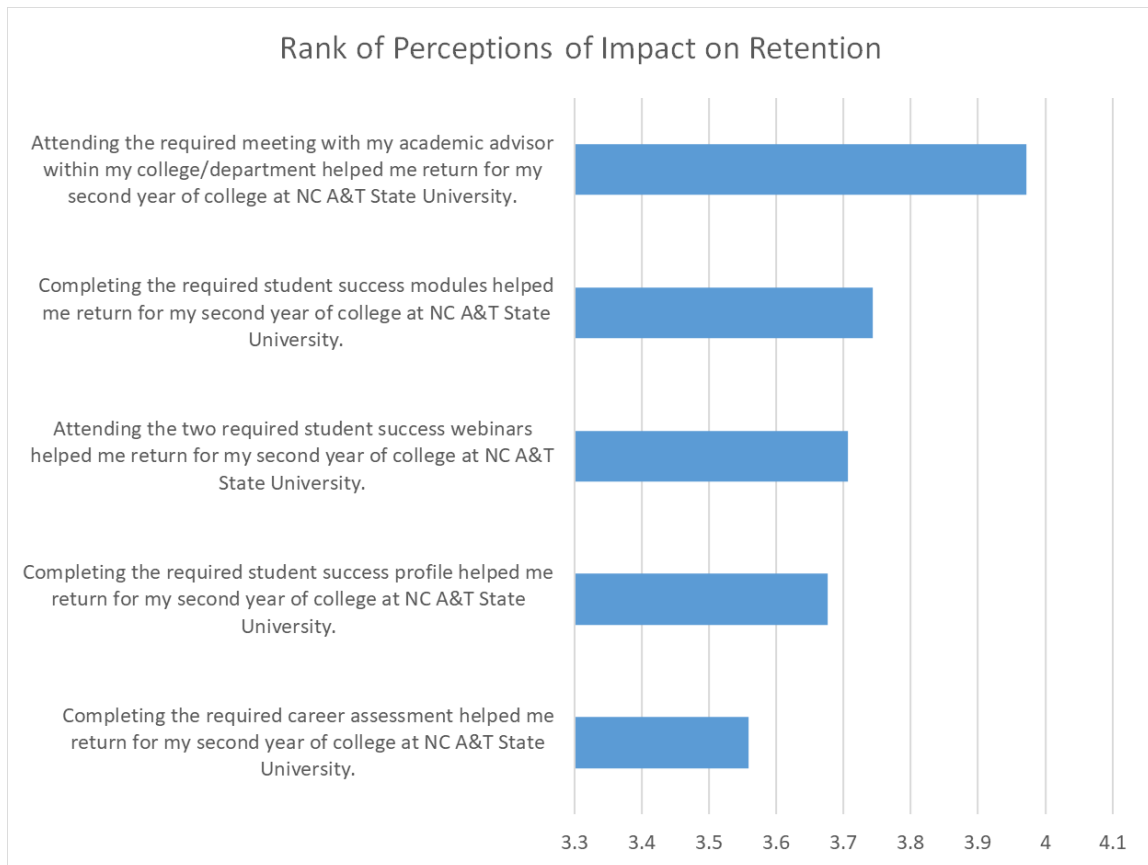
Table 35*Perceptions of Impact of SCS:099 Course on Retention*

Statement	<i>N</i>	<i>M</i>	<i>SD</i>
Completing the required student success modules helped me return for my second year of college at NC A&T State University.	35	3.71	1.22
Attending the required meeting with my academic advisor within my college/department helped me return for my second year of college at NC A&T State University.	35	3.97	1.07
Attending the two required student success webinars helped me return for my second year of college at NC A&T State University.	34	3.71	1.12
Completing the required student success profile helped me return for my second year of college at NC A&T State University.	34	3.56	1.25
Completing the required student success profile helped me return for my second year of college at NC A&T State University.	34	3.68	1.15

In response to Research Question 6, of the five components of the SCS:099 Course, respondents perceived attending the required meeting with their academic advisor within their college/department as having been the most helpful component in their retention (Figure 4).

Figure 4

Rank of Agreement with Statements on Impact of SCS:099 Course on Retention



Summary

This chapter presented the data analyses and results of the data collected in a non-experimental, quantitative ex post facto, causal comparative study that examined the relationship between a student success course (independent variable) and the academic success and retention (dependent variables) of first-year students at a Historically Black University. It restated (1) research questions, (2) null hypotheses, and (3) variables. It also presented the (4) population and sample demographics, (5) restated the data

collection methods and instrumentation used in this study and concluded with (6) the data analyses of the null hypotheses and corresponding results.

In summary, this chapter included a description of the data analyses and results of this study. Statistically significant differences between two groups were examined—the intervention group and the control group. The results summarized in Table 36 indicate there were significant differences in the retention rate and academic success of students who completed the SCS:099 Course and those who did not. In addition, there was a significant difference between the retention rate and the change in first-year GPA of the intervention group and the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. Completion of the SCS:099 Course was the strongest predictor of retention and academic performance amongst the variables. Results from the study also indicated that students who completed the student success course perceived attending the required meeting with their academic advisor within their college/department as the most helpful component in improving their GPA (academic success) and returning their second year (retention). A summary—implications related to research questions and future research—is discussed in Chapter 5.

Table 36*Summary of Results*

Null Hypothesis Number	Null Hypothesis	Rejected	Significance
1	There is no significant difference between the retention rate of the intervention group and that of the control group	Yes	Significant
2	There is no significant difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group	Yes	Significant
3	There is no significant difference between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status and first-generation status	Yes	Significant
4	There is no difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status	Yes	Significant

CHAPTER 5

SUMMARY

Introduction

As higher education costs continue to rise in the United States, as well as national student debt, a vested interest in college access, affordability, student retention, and degree completion has become more evident (National Center for Education Statistics, 2019; Hanover Research, 2014; Hanson, 2021; Lobosco, 2017; U.S. Department of Education, n.d.). Minority students, first-generation college students, students from low socioeconomic status, those experiencing financial hardships, and those who are academically underprepared are at higher risk of underperforming academically while pursuing their postsecondary education, which can have a negative impact on their retention and graduation (Brookover et al., 2021; Horton, 2015; Roble, 2017; Soria et al., 2014; Tierney & Duncheon, 2015).

Institutions of higher education across the United States are actively engaged in efforts to improve student outcomes. Accountability measures have been instituted by colleges and universities, as well as accrediting bodies and the federal government, with special emphasis on student retention and graduation rates as key indicators of institutional performance and institutional effectiveness (Alzen et al., 2021; Barclay, 2018; Millea et al., 2018).

Closing this achievement gap requires educators to take a closer look at the complex concept of student retention and understand the variables and factors associated with their successful outcomes from both an individual and institutional perspective (Beasley et al., 2020; Tinto, 1993; Xu, 2017). An in-depth examination of the effectiveness of strategies specifically designed for the retention and academic success of at-risk students is needed to help improve student outcomes.

This chapter provides a summary—implications related to research questions and future research—of the findings of this non-experimental, quantitative ex post facto, causal comparative study that examined the relationship between participation in a student success course (independent variable) and the academic success and retention (dependent variables) of first-year students at a Historically Black University. The research questions posed were used to determine if completion of the student success course had a positive impact on retention and academic success. More specifically, this study examined differences in the retention rate and academic success of students on academic probation who completed the course in relation to those in the control group for the Spring 2020, Spring 2021, and Spring 2022 terms. The findings of this study yielded quantitative, empirical evidence that supports a higher retention rate and increase to GPA (academic success) for those students who completed the course.

This chapter provides an overview of (1) research questions, (2) null hypotheses, (3) theoretical framework, (4) variables, (5) population and sample demographics, (6) data collection and instrumentation used, and (7) a discussion of the results. The chapter also presents (8) the limitations of the study, (9) recommendations for future research and practice, and concludes in a summary of the study and results obtained.

Research Questions Restated

The research questions guiding this study were:

1. Is there a difference between the retention rate of the intervention group and that of the control group?
2. Is there a difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group?
3. Are there differences between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
4. Are there differences between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?
5. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their academic success (improved GPA)?
6. Which components of the SCS:099 Course do students in the intervention group perceive to have had the best impact on their retention?

Null Hypotheses Restated

1. There is no significant difference between the retention rate of the intervention group and that of the control group.

2. There is no significant difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group.
3. There is no difference between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.
4. There is no difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status.

Theoretical Framework

The theoretical framework guiding the study is founded on student retention; more specifically, Vincent Tinto's (1993) Model of Institutional Departure, which underscores the significance of students integrating into the formal and informal academic and social systems. This study focused on the 'academic system' component of Tinto's (1993) model, given the student success course examined impacts all four areas of the academic system: grade performance, intellectual development, academic integration, and goal commitment. Furthermore, among retention theories, this model has emerged an integral model for the expansion and understanding of the retention of a diverse student body, and places special emphasis on the importance of the first year of college students, as well as an emphasis on minoritized student groups.

Variables

In this study, participation in a student success course was the independent variable, and academic success and retention were the dependent variables. Quantitative variables were examined, including completion of the SCS:099—Strategies for Academic Success Course, high school GPA, SAT/ACT scores, first-year first and second semester GPA, and retention rate. Categorical variables were also examined, including academic standing, gender, socioeconomic status, and first-generation status.

Population and Sample Demographics

A quantitative, ex post facto research design using descriptive statistics and regression analyses was employed to examine the research questions, as well as to understand students' perceptions of the effectiveness of the various student success course components in relation to their retention and academic success.

Secondary Dataset

The sample for this study was comprised of 1,464 first-year students attending a Southeastern HBCU (with a population of over 13,000 students) who were placed on academic probation after completion of their first semester of college—Fall 2019, Fall 2020, and Fall 2021. This includes a total of 332 students enrolled in the Fall 2019 term (22.67%), 422 students enrolled in the Fall 2020 term (28.82%), and 710 students enrolled in the Fall 2021 term (48.49%). All students included in this sample earned less than a 2.0 GPA in their first semester.

Primary Dataset

Of the 1,464 students included in this sample, the online self-administered survey was deployed to the 176 students on academic probation who successfully completed the required student success course in the subsequent Spring 2020, Spring 2021, and Spring 2022 terms, respectively, and achieved a 2.0 GPA or higher for their second term GPA. Successful completion of the course requires that students pass with at least an 80% overall score for the course. Of the 176 students invited to complete the survey, a total of 44 students participated in completing the survey.

Data Collection and Instrumentation Overview

Institutional Review Board (IRB) approval was secured for secondary data and primary data collection procedures from both Andrews University and North Carolina A&T State University. Secondary data were obtained from the Analytics Division of the OSPIE at NC A&T State University on students in the control group, which is comprised of students who 1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, and (3) did not complete the SCS:099—Strategies for Academic Success Course in the second semester of their first year. These data were obtained in the form of a secondary data set. This secondary data set included information on their first-time, full-time status, academic standing, enrollment in the SCS:099—Strategies for Academic Success Course in their second semester of their first year, high school GPA, SAT/ACT scores, first-semester GPA, second-semester GPA, gender, first-generation status, socioeconomic status, and second-year enrollment (as a measure of retention).

Once IRB approval was obtained, primary data were collected via an online survey created by the researcher and programmed in Qualtrics (Appendix A). An email including an informed consent and invitation to participate in the study was sent by the researcher to students in the intervention group via their NC A&T State University email. The email was sent to students in the intervention group who (1) enrolled as first-time, full-time students in the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, (2) were placed on academic probation after completing the first semester of their first year, (3) completed the SCS:099—Strategies for Academic Success Course in the second semester of their first year, (4) improved their GPA by the end of the second semester of their first year, and (5) continued their enrollment into the first semester of their second year (retention).

Discussion of Results

The results of this study are captured by the six research questions presented. The general findings are discussed in this concluding chapter to situate the results presented in Chapter 4 within the current state of literature on the topic.

Research Question 1

Is there a difference between the retention rate of the intervention group and that of the control group?

Findings from this study indicate that students who completed the student success course (intervention group) were more likely to be retained than those who did not complete the course (control group). Of the 1,464 students placed on academic probation in the Fall 2020, Fall 2021, and Fall 2022 semesters, 957 did not complete the student

success course and 507 completed it. Findings revealed that the intervention group was retained at a 59% rate, while those who did not complete the course were retained at a 22% rate. These findings suggest that students on academic probation who complete the academic recovery course are over two times more likely to be retained than those who do not complete the course.

Literature supports these findings and provides context on the significance of academic recovery strategies, such as the course examined in this study, in helping students improve their academic performance and retention. The literature revealed that between 20-25% of undergraduate students will be placed on academic probation at least once during their college tenure (Bowman et al., 2020; Hamman, 2018; León et al., 2019). As posited by León et al. (2019), once a student is placed on academic probation, the likelihood of retaining them decreases significantly. To address the challenges associated with academic underperformance, institutions of higher education offer academic recovery interventions to help students on academic probation improve their academic standing and increase their retention (Gonzalez, 2022; Hamman, 2012; León et al., 2019). Among these interventions, academic recovery courses have proven to be effective in increasing student academic performance (i.e., GPA) and helping retain and graduate students on academic probation (Flynn, 2014; León et al., 2019; Mellor et al., 2015; McGrath & Burd, 2012).

Findings for Research Question 1 are consistent with a study conducted by León et al. (2019) which aimed to assess the impact of a required course for students on academic probation. They found that those who completed the course were approximately 20% more likely to be retained and graduate in comparison to those

students on academic probation who did not complete the course. Similarly, a study conducted by McGrath and Burd (2012) revealed that students on academic probation who completed a mandatory success course were more likely to be retained and graduate than those who did not complete the course.

These findings are significant, given they provide evidence that completing a student success course is positively correlated with increased retention. While course structure and offerings may vary by institution, this supports the notion that institutions of higher education can help improve student retention by implementing early intervention strategies, such as the student success course examined in this study, that focus on helping students improve their academic performance.

Research Question 2

Is there a difference between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group?

Findings from this study indicate the intervention group achieved a higher second term GPA than those who did not complete the student success course. Students who did not complete the student success course (control group) improved their cumulative GPA by .16 on a 4.0 scale, while those who completed the course (intervention group) experienced a .55 increase to their GPA. These findings suggest that completing the student success course helps improve second term GPA.

Literature supports this study's findings relative to Research Question 2 and supports the significance of academic performance (measured by GPA) in the first year as a key indicator of retention (Millea et al., 2018). As was posited for Research Question 1, to address the challenges associated with academic underperformance, institutions of

higher education offer academic recovery interventions to help students on academic probation improve their academic standing and increase their retention (Hamman, 2012; León et al., 2019). Among these interventions, academic recovery courses have proven to be effective in increasing student academic performance (i.e., GPA) and helping retain and graduate students on academic probation (Flynn, 2014; León et al., 2019; Mellor et al., 2015; McGrath & Burd, 2012). This is further supported by Bowering et al.'s (2017) findings of their examination of the effectiveness of a 14-week intervention course on students placed on academic probation. In addition to improved cognitive strategies, and study skills reported by students who completed the course, 81% of participants' GPA significantly improved by an average of 0.57 points. Of those who significantly improved their GPA, 66% improved their academic performance enough to no longer be on academic probation.

These findings are significant given the implications for both students and institutions of higher education. As noted by Gonzalez (2022), poor academic performance (below a 2.0 GPA)—resulting in academic probation and academic dismissal—has direct implications on students and institutions of higher education in various contexts. These implications include student financial aid eligibility in the form of Pell grants, which Gonzalez (2022) underscores accounts for over 33% of financial aid undergraduate students receive. At North Carolina A&T State University, financial aid recipients—which include Pell Grant recipients—are required to meet satisfactory academic progress (SAP), which requires a minimum 2.0 GPA and to have earned at least 67% of attempted credit hours (Student Handbook: North Carolina Agricultural and Technical State University, 2023-2024). In addition, students unable to meet these criteria

are placed on financial aid suspension, preventing them from accessing federal financial aid to cover tuition costs. This can prevent a student from enrolling in courses in subsequent terms, if they are unable to afford the direct, out-of-pocket, cost of tuition, thereby negatively impacting student retention.

In addition to the financial implications of not earning a minimum 2.0 GPA for students, institutions of higher education are negatively impacted given the potential attrition rate due to academic dismissal students can face if they fail to improve their academic performance to minimum standards (Gonzalez, 2022). This directly impacts an institution's financial health due to lost revenue from student attrition. Gonzalez's (2022) conducted a study that demonstrated that "losing only 136 students from a college that consistently enrolls over 2,500 undergraduate students within a 5-year span of cohorts has a substantial impact to the financial health of the institution" (p. 81). More specifically, Gonzalez (2022) noted this accounted for nearly \$450,000 from student attrition, of which 88% was attributed to lost funds from students who were academically dismissed.

It is important to highlight that while these findings are presented as significant in the context of student retention and financial implications for both students and institutions of higher education, there are several other areas that can be significantly impacted by students' academic performance (measured by GPA). Student attrition has posed a significant threat to individual students, institutions of higher education, and the national economy—particularly from an occupational, societal, and financial standpoint (Barclay et al., 2018; College Possible, 2018; Tinto, 1993). These also include school rankings, which can influence enrollment (Morse, 2021), accreditation, performance-

based funding (Gonzalez, 2022), merit-based scholarships, internship opportunities, eligibility to join student organizations on campus—all of which consider student GPA as a key academic performance indicator relative to student success. These considerations point to the significance of students' academic performance (GPA) and the need for institutions of higher education to “prioritize providing additional, intentional support to students experiencing academic difficulty” (Gonzalez, 2022, p. 81), such as the student success course examined in this present study.

Research Questions 3 and 4

Findings for Research Questions 3 and 4 are presented in a combined format given the same independent variables (high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status) were examined relative to retention (dependent variable for Research Question 3) and change in first-year GPA (dependent variable for Research Question 4). Both research questions and findings are presented, followed by a discussion on the existing body of literature, as well as significance of the findings, relative to the independent variables.

RQ 3: Are there differences between the retention rate of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?

RQ 4: Are there differences between the change in first-year GPA (first semester to second semester GPA) of the intervention group and that of the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status?

Findings

In response to Research Question 3, the results from this study indicate there is a statistically significant difference between the retention rate of the intervention group in comparison the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. Similarly, in response to Research Question 4, the results from this study indicate there is a statistically significant difference between the change in first-year GPA (dependent variable) of the intervention group and that of the control group when controlling for the same variables. For both models, completion of the SCS:099 Course was the strongest predictor of retention rate and the change in first-year GPA (academic performance). Findings for research questions 3 and 4 revealed that low socioeconomic status and high school GPA were strong predictors of retention and change in first-year GPA amongst the variables. First-generation status also emerged as a strong predictor of retention.

Discussion

High school GPA and SAT/ACT scores

The existing body of literature highlights the significance of high school GPA and SAT/ACT scores related to student retention and academic success (Caviglia-Harris & Maier, 2020; Millea et al., 2018; Tierney & Duncheon, 2015; Westrick et al., 2015). In part, Millea et al. (2018) found that retention rates were higher for students who were academically prepared to enter college (indicated by high school GPA and ACT/SAT scores). Similarly, Westrick et al. (2015) found that both ACT scores and high school academic performance were highly correlated with first-year academic performance,

which was the strongest predictor of retention. Furthermore, Williams et al. (2018) studied the predictability of cognitive and non-cognitive factors on student retention and found that academic preparedness (high school GPA and ACT/SAT scores) were the strongest predictors of college retention.

Gender

The existing body of literature highlights the significance of gender relative to student retention and academic performance. The literature revealed female students are retained at higher rates and perform better academically than their male counterparts (Verbree et al., 2022; National Center for Education Statistics 2019, 2020, 2021; Farmer & Hope, 2015). The gap has remained relatively consistent over the last decade, with female students graduating at a rate 5%-6% higher than male students (National Center for Education Statistics, 2019, 2020, 2021). These graduation rates account for students who graduated from the same institution at which they began their postsecondary degree (National Center for Education Statistics, 2019, 2020, 2021), indicating female students are retained at higher rates than their male counterparts.

It is critical to note that these findings do not suggest female students have greater cognitive ability in comparison to male students, rather, the academic gender gap can be influenced by a myriad of factors (Verbree et al., 2022). It is of equal importance to ground those factors in context—institutional setting, race and ethnicity, and other factors that could impact student attrition—especially for Black male students, such as environmental, social, and psychological factors that could affect sense of belonging and academic and social involvement, all of which are critical to their success (Hotchinks & Dancy, 2015; Strayhorn, 2014).

Low socioeconomic status and first-generation status

The existing body of literature revealed that irrespective of their academic ability, low-income students are less likely to attend college, persist, and graduate in comparison to students from higher income families or those who are not first-generation college students (Soria et al., 2014; Vaughan et al., 2020). In addition, first-generation status has also emerged as a statistically significant predictor of lower GPA in comparison to non-first-generation college students. In a study conducted by Holmes and Slate (2017) exploring the differences in GPA by gender and ethnicity/race as a function of first-generation status, the researchers found that first-generation community college students had statistically significantly lower GPAs than did non-first-generation community college students.

Similarly, as noted by Vaughan et al. (2020), first-generation college students face financial challenges that often result in concurrent employment in addition to taking college courses. The researchers further suggested that this often results in less time and commitment to academic-related requirements and less contact with faculty members, in addition to reluctance to seek faculty support, all of which increase student attrition (Vaughan et al., 2020). In addition, first-generation college students experience academic barriers, lower grades, academic under preparedness, have less access to financial resources, and work more while matriculated as college students in comparison to their continuing-generation peers (Engle & Tinto, 2008; Ricks & Warren, 2021; Quinn et al., 2019). As Engle and Tinto (2008) suggested, low-income and first-generation college students face barriers to becoming academically and socially integrated in college by way of study groups, interactions with peers and faculty, and extracurricular activities—

which have been established as critical to college success (Engle & Tinto, 2008; Tinto, 1993; Wu, 2019; Xu, 2017).

Significance

Findings for Research Question 3 and Research Question 4 suggest the independent variables were collectively statistically significant in predicting retention and change in first-year GPA, respectively, when analyzed within the regression models. Amongst the variables, completion of the SCS:099 Course, low socioeconomic status, and high school GPA emerged as independently statistically significant variables relative to both retention and first-year GPA (academic performance), respectively. First-generation status also emerged as an independently statistically significant variable in relation to first-year GPA (academic performance).

Understanding the statistical significance of the independent variables in predicting retention and change in first-year GPA can help student support staff identify students at-risk of poor academic performance based on these factors. Moreover, this can include taking a proactive approach to the deployment of timely outreach and communication with students to establish rapport, as well as employing early intervention strategies—such as referral to resources—to help students understand how to navigate any challenges that may potentially hinder their academic progress. Adapting this early intervention approach can promote students' integration into the institution's academic and social systems, which Tinto's 1993 Model of Institutional Departure deems critical to student retention.

Research Questions 5 and 6

Findings for Research Questions 5 and 6 are presented in a combined format given both questions include students' perceptions of the five components of the SCS099 course and their impact on their retention and academic success (improved GPA). Both research questions and findings are presented, followed by a discussion on the existing body of literature, and the significance of the findings.

RQ 5: Which components of the SCS099 Course do students in the intervention group perceive to have had the best impact on their academic success (improved GPA)?

RQ 6: Which components of the SCS099 course do students in the intervention group perceive to have had the best impact on their retention?

Findings

This study revealed that students who completed the SCS:099 Course perceived that attending the required meeting with their academic advisor within their college/department was the most helpful component in improving their GPA (academic success). Completing the required student success profile and attending the two required student success webinars were ranked equally as the second most helpful components of the course. Completing the required student success modules was ranked fourth, and completing the required career assessment was ranked as the fifth most helpful. It is important to note that the rankings ranged from 3.63-3.89 on a 1-5 Likert scale with higher scores indicating higher rates of agreement.

Similarly, this study revealed that students who completed the student success course perceived that attending the required meeting with their academic advisor within

their college/department was the most helpful component in their retention. Completing the required student success profile was ranked the second most helpful in their retention, attending the two required student success webinars was ranked the third most helpful, completing the required student success modules was ranked fourth, and completing the required career assessment was ranked as the fifth most helpful. It is important to note that the rankings ranged from 3.56-3.97 on a 1-5 Likert scale, with higher scores indicating higher rates of agreement.

Discussion

These findings support the existing body of literature related to the effectiveness of academic advising on helping improve students' academic performance. As noted by Chiteng Kot (2014), "Tinto (1993) indicated that effective retention programs recognize academic advising as being at the core of institutional success to educate and retain students" (p. 529). In their study on the impact of academic advising on first-year performance, Chiteng Kot (2014) found that academic advising had a positive and significant impact on first-term GPA, second term-GPA, and first-year cumulative GPA. Considering first-year academic performance is a strong predictor of student retention, their findings support Tinto's (1993) observations on the impact of academic advising on retention (Chiteng Kot, 2014).

Moreover, the existing body of literature identifies academic advising as one of the most common student support services, often facilitating interactions students have with the institution and increasing student satisfaction, navigational capital, and retention (Alzen et al., 2021; Lynch & Lungrin, 2018; Sabay & Wiles, 2020; Swecker et al., 2018). These services include degree planning, academic goal setting, problem solving, major

and course selection, navigation of academic policies, registration, decision making, and problem solving (Lynch & Lungrin, 2018; Swecker et al., 2013). These services are helpful for at-risk students on academic probation and first-generation students (Swecker et al., 2013). An earlier study conducted by McGrath and Burd's (2012) revealed that students on academic probation who completed a mandatory success course were more likely to be retained and graduate in comparison to students on academic probation who did not complete the course. McGrath and Burd (2012) attributed the course's success to the social and academic engagement it facilitated through its curriculum, in addition to the course being taught by academic advisors, given their academic expertise. The course also required meetings with a professor, academic advisor, student organizations or other student services (McGrath & Burd, 2012). McGrath and Burd's findings align with Tinto's (1993) Model of Institutional Departure and the role an academic and social environment plays on the retention of students.

Significance

While the SCS:099 Course only required one meeting with the students' assigned academic advisor, what is not captured in the study's findings is how these meetings are structured. The required meeting includes an in-depth discussion and overview of a student success plan to help students improve their academic performance and maintain their eligibility to remain in their major of choice. Students are also required to commit to weekly or bi-weekly meetings with their assigned advisor throughout the term, for the purpose of having support and guidance on improving their academic outcomes. It is important to highlight this first meeting results in various interactions with the student's academic advisor which, in turn, helps students develop rapport with their academic

advisor and further integrate into the academic and social environments Tinto's (1993) Model of Institutional Departure posits as integral to student retention.

Students also ranked the other course components within close range, indicating they perceive the five components of the course to be comparatively helpful in their academic success and retention. These findings suggest students at North Carolina Agricultural and Technical State University perceive completing the SCS:099—Strategies for Academic Success Course as having a positive impact on their academic success and retention.

Limitations

While this study provided great insight on the significance of the relationship between a student success course and the academic success and retention of first-year students on academic probation, it was limited to first-time full-time freshmen at a Historically Black University. In this regard, results cannot be generalized to include racially diverse institutions of higher education, considering the vast majority of students at the institution studied are of African American/Black descent—over 80% (U.S. Department of Education, 2022).

In addition, this study focused on the academic system of Tinto's (1993) Model of Institutional Departure given the SCS:099 Course's direct alignment with the four areas—grade performance, intellectual development, academic integration, and goal commitment. More specifically, grade performance is a key indicator of academic success; maximizing the students' potential to become independent thinkers and successful learners is a critical component of intellectual development; focus on the utilization of university resources, developing quality study practices, and adjusting to the

university environment are all aspects of academic integration; and taking personal responsibility for their academic success is an integral part of goal commitment. Nevertheless, recommendations for future research include assessing the alignment of the course with the ‘social system’ (peer interactions and extracurricular activities) of Tinto’s (1993) Model of Institutional Departure, given the significance of students’ social integration as a critical component of student retention. Furthermore, in light of COVID-19’s impact on teaching and learning, specifically related to the shift from in-person to virtual and online teaching and learning, future research can be conducted to understand the impact of the pandemic of social integration and its relationship to student retention and academic success outcomes.

This study was also limited to a short period encompassing three academic years. Data were collected on students’ perceptions of the course components they considered to be most impactful on 44 participants, which is a small sample from which to draw generalizable conclusions. Although the survey invitation was sent to the 176 students who completed the student success course and earned a second term minimum 2.0 GPA within the terms examined, the timing of when the survey invitation was sent could have had an impact on the number of participants. It is important to note the survey was sent after the Spring 2023 term had concluded, which may have limited students’ engagement with their email accounts—which was the method used to send the survey invitation. In the interest of time, the survey remained open for four weeks and was not incentivized.

An additional limitation is the possibility of self-selection bias relative to students completing the course (control group). All first-time, full-time freshmen on academic probation are automatically enrolled in the SCS:099 Course, which is 0 credits. Although

not explicitly noted in the course description, students who do not complete the course are not penalized. To that end, this could pose a threat to generalization, considering the traits that led the students to complete the course (such as motivation, academic grit) could account for better academic performance and retention outcomes, as opposed to attributing these outcomes to the completion of the course.

Recommendations

Several recommendations for future research emerged from this study. The first recommendation is to examine the specific elements of the coursework in the student success course and their impact on cognitive skills fundamental to college success—quantitative reasoning and verbal fluency. The course objectives include (1) demonstrating effective study skills, time management, and balancing personal and social life with the academic life; (2) utilizing and identifying University resources that will enhance academic success; and (3) exhibiting academic behaviors and attitudes that will enhance academic success. The course assignments include (1) one meeting with an academic advisor, (2) completion of student success modules, (3) completion of a career assessment, (4) completion of a student success profile, and (5) attending two student success webinars.

Bloom's Taxonomy is a system educators use to guide the development of assessments, curriculum, and instructional methods to distinguish varying levels of human cognition (The Glossary of Education Reform, 2014). An application of Bloom's Taxonomy revealed that the three objectives of the course have an emphasis on practical skills, attitudes, and behaviors essential for academic success rather than a direct emphasis on verbal fluency or quantitative reasoning. Similarly, while there is no direct

alignment with quantitative reasoning skills, nor substantive information on the specifics of the assignments for this course, there is a possibility verbal fluency could be improved through reading and understanding course content, discussing concepts, and expressing understanding either verbally or in written format. Future research can include a closer examination of these concepts to determine if the course has an impact on verbal fluency and/or quantitative reasoning.

The second recommendation is to examine a broader student population to include students on academic probation from diverse institutions of higher education, as well as to examine differences in academic performance and retention longitudinally related to those who complete an academic recovery course. To gain a better understanding of students' perceptions of what they consider most impactful in improving their academic performance and retention, a mixed methods approach to include qualitative research is recommended.

It would also be helpful to examine outcomes and student perceptions for students matriculated prior to the COVID-19 pandemic, during the pandemic, and after the pandemic, to contribute to the growing body of research related to the impact of such on the higher education landscape. The current study's findings relative to retention and academic performance may have been impacted by the COVID-19 pandemic due to its disruption to teaching and learning, evidenced by increased academic under preparedness and academic under performance, among other challenges, which disproportionately affect minority students (Ashta et al., 2023; Soysal et al., 2022; Xu et al., 2022). In this regard, additional research to assess the impact of the COVID-19 pandemic on academic success and retention should be conducted using a mixed methods approach that includes

quantitative and qualitative data to understand how to better support students on academic probation and help improve their postsecondary outcomes.

Institutions of higher education should also have support services in place for students who qualify as “at-risk” of attrition and poor academic performance, based on predictor variables such as high school GPA, SAT/ACT scores, gender, low socioeconomic status, and first-generation status—all of which have been grounded in the existing body of literature as significant factors related to student outcomes.

Recommendations for practice include actively examining current intervention strategies in place designed to promote academic success and retention to gauge their impact on these outcomes, with the intent to pivot strategies accordingly. More specifically, it is critical for institutions of higher education to understand how these strategies are driving student outcomes based on data, as well as students’ feedback, specific to their institution and student population. For higher education leaders, the combination of both quantitative and qualitative data is critical to understanding how to best serve students, while having the evidence necessary to substantiate ongoing efforts, or the re-design of current strategies that may not be impacting student success outcomes as expected.

As it relates to North Carolina Agricultural and Technical State University—where this study was conducted—several recommendations for practice have emerged from these findings. The results of this study have been considered in a proposal to restructure the SCS:099—Strategies for Academic Success Course to incorporate additional structured meeting time with students’ assigned academic advisors. The Director of Academic Recovery Services, in conjunction with the Executive Director for the Center for Academic Excellence, have agreed to implement this change with the

intent to further examine its relationship to retention and academic performance outcomes. More specifically, the intent to continue expanding on this present study's findings is based on the students' perception and ranking of the required meeting with their academic advisor as having been the most impactful of the course requirements as it relates to their retention and improved academic performance. Furthermore, the researcher has been tasked with further examining the effectiveness of other academic recovery services offered by the Center for Academic Excellence relative to retention and academic performance. These services include early alerts, academic advising meetings for students on academic probation, student success programming, and tutoring.

Findings from this study related to students' perceived impact of academic advising on their retention and academic success have also contributed to data collection efforts on the impact of a recently implemented centralized academic advising framework at North Carolina A&T State University. This newly implemented framework resulted in the expansion of the current academic advising workforce by sixteen professional academic advisors assigned to all new freshmen and new undeclared transfer students (students who have not yet decided on a major or were ineligible to declare their major of choice based on departmental criteria). This cohort of new freshmen and new transfers accounts for approximately 2,700 new students who matriculated in the Fall 2023-Spring 2024 academic year.

Additional recommendations for North Carolina A&T State University include implementing a strategy to encourage more students on academic probation to complete the SCS:099—Strategies for Academic Success Course. Of the 1,464 students on academic probation included in the secondary data set examined, 957 students did not

complete the course. Of the 507 who did, 176 (more than one third) were able to earn a minimum 2.0 GPA their second term, which is the minimum required GPA needed for students on academic probation to continue their enrollment at the institution into the following term. This, in turn, can positively impact the retention of students on academic probation. It is recommended that results of this study be used to inform students on the positive impact completing the course may have on their academic performance and retention based on empirical data.

Conclusions

This chapter provided an overview of (1) research questions, (2) null hypotheses, (3) theoretical framework, (4) variables, (5) population and sample demographics, (6) data collection and instrumentation used, and (7) a discussion of the results. The chapter also presented (8) the limitations of the study, (9) recommendations for future research and practice, and concludes in a summary of the study and results obtained.

Based on the interpretation of the findings of this study, it can be concluded that a statistically significant relationship exists between completing a student success course and academic success and retention of first-year students at a public Historically Black University. Data collected indicate there were significant differences in the retention rate and academic success of students on academic probation who completed the student success course and those who did not. In addition, there was a significant difference between the retention rate and change in first-year GPA of the intervention group and the control group when controlling for high school GPA, SAT/ACT scores, gender, socioeconomic status, and first-generation status. Completion of the student success

course was the strongest predictor of retention rate and the change in first-year GPA (academic performance). Findings revealed that low socioeconomic status and high school GPA were strong predictors of both retention and change in first-year GPA amongst the variables. First-generation status also emerged as a strong predictor of retention. Results from the study also indicated that students who completed the student success course perceived attending the required meeting with their academic advisor within their college/department as the most helpful component in improving their GPA (academic success) and returning their second year (retention).

This study contributed to the limited research on the academic success and student retention of students on academic probation (Hamman, 2018; McGrath & Burd, 2012), specifically related to the dearth of empirical research on the impact of student success courses on students on academic probation (Beasley et al., 2020; McGrath & Burd, 2012). This study provided additional empirical evidence in line with recent studies that have demonstrated students on academic probation who completed a student success course have increased retention and graduation rates when compared to those who did not (Flynn, 2014; León et al., 2019; Mellor et al., 2015). The present study contributed to the body of research focused on examining and reframing existing student success strategies aimed at retaining high-risk students, such as students on academic probation, and increasing the probability of their success. These implications are of critical importance considering the role retention and academic success play in both individual and institutional outcomes.

In closing, understanding this relationship can provide insight for institutions of higher education in their assessment of current programs, early intervention strategies,

and the future direction of student retention and the academic success of African American students at HBCUs, as well as set the stage for future research and practice across various student populations and institutions of higher education.

APPENDIX A
STUDY SURVEY

Section 1: Demographic Information

1. Did at least one of your parents complete a bachelor's degree?
Yes / No
2. Are you a Pell Grant recipient?
Yes / No
3. What is your gender?
Male / Female/ Other
4. What was your ACT score? If taken more than once, please include your highest score_____ / Not Applicable (If you did not take the ACT, select Not Applicable)
5. What was your SAT score? If taken more than once, please include your highest score_____ / Not Applicable (select if you did not take the SAT)
6. What was your high school GPA? _____
7. Are you Hispanic or Latino?
Yes/ No
8. What is your race?
African American/Black
American Indian/Alaskan Native
Native Hawaiian or Other Pacific Islander
Asian
White
Other Race _____ (please fill in the blank)
9. Which semester was the start of your full-time (12 or more credits) matriculation at NC A&T?
Fall 2019
Fall 2020
Fall 2021

10. Which semester did you complete the SCS:099—Strategies for Academic Success Course?

Spring 2020

Spring 2021

Spring 2022

Section 2

1. How satisfied were you with the student success modules you were required to complete?

Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied

2. How satisfied were you with the meeting you were required to attend with your academic advisor/coach within your college/department?

Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied

3. How satisfied were you with the two student success webinars you were required to attend?

Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied

4. How satisfied were you with the career assessment you were required to complete?

Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied

5. How satisfied were you with the student success profile you were required to complete?

Very Dissatisfied Dissatisfied Neither Satisfied nor Dissatisfied Satisfied Very Satisfied

Section 3

1. Completing the required student success modules helped me improve my cumulative GPA.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

2. Attending the required meeting with my academic advisor within my college/department helped me improve my cumulative GPA.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

3. Attending the two required student success webinars helped me improve my cumulative GPA.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

4. Completing the required career assessment helped me improve my cumulative GPA.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

5. Completing the required student success profile helped me improve my cumulative GPA.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

Section 4

1. Completing the required student success modules helped me return for my second year of college at NC A&T State University.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

2. Attending the required meeting with my academic advisor within my college/department helped me return for my second year of college at NC A&T State University.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

3. Attending the two required student success webinars helped me return for my second year of college at NC A&T State University.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

4. Completing the required career assessment helped me return for my second year of college at NC A&T State University.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

5. Completing the required student success profile helped me return for my second year of college at NC A&T State University.

Strongly Disagree Disagree Neither Agree nor Disagree Agree Strongly Agree

APPENDIX B

INFORMED CONSENT FORM

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY
INFORMED CONSENT TO PARTICIPATE IN AN ANONYMOUS RESEARCH SURVEY



Study Title: The Relationship between a Student Success Course and the Academic Success and Retention of First-Year Students at a Historically Black University

Principal Investigator: Madeline Brown, M.A.

Dear Respondent,

I am inviting you to participate in a research study pertaining to the relationship between completing the SCS:099 Strategies for Academic Success Course and the academic success and retention of first-year students. You are being asked to participate because you completed the SCS:099 Strategies for Academic Success Course following the Fall 2019 semester, Fall 2020 semester, or Fall 2021 semester, as well as returned to NC A&T State University for your second year of college in the Fall 2020, Fall 2021, and Fall 2022 semester, respectively. The procedure involves completing an online survey that will take approximately 5 minutes. The link to access the survey is included below.

The survey questions will be about your level of satisfaction with, and the components of, the SCS:099 Strategies for Academic Success Course you perceive to have had the best impact on your improved GPA and second-year retention. Through your participation I hope to understand your level of satisfaction with these respective components of the course, as well as whether you perceive these requirements to have helped you improve your GPA, and whether they helped you return for your second year of college at NC A&T. You must be at least 18 years old to participate.

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

There are no foreseeable risks associated with participation in this study. Participation in surveys does not result in any more than the minimal risks of everyday life.

This project has been approved by the Institutional Review Board (IRB) at North Carolina A&T State University. Your participation is voluntary and there is no penalty if you do not participate. You may stop the survey at any time or skip any questions you do not wish to answer.

If you have any questions about completing the questionnaire or about being in this study, you may contact me at mbrown5@ncat.edu or (336) 285-3329. If you have any study-related concerns or any questions about your rights as a research study participant, you may contact the Office of Research Compliance and Ethics at North Carolina A&T State University at (336) 285-3179 or email rescomp@ncat.edu.

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

Follow this link to the Survey:

https://ncat.az1.qualtrics.com/jfe/form/SV_25gtEZnfOnmoqj4

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY
INFORMED CONSENT TO PARTICIPATE IN AN ANONYMOUS RESEARCH SURVEY



Regards,

Madeline Brown, M.A.
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REFERENCES

- Aljohani, O. (2016). A Comprehensive Review of the Major Studies and Theoretical Models of Student Retention in Higher Education. *Higher education studies*, 6(2), 1-18.
- Allen, M. (2017). *The sage encyclopedia of communication research methods* (Vols. 1-4). Sage. <https://doi.org/10.4135/9781483381411>
- Altbach, P. G., Bastedo, M. N., & Gumport, P. J. (2016). *American higher education in the 21st century. Social, political, and economic challenges* (4th ed.). John Hopkins University Press.
- Alzen, J. L., Burkhardt, A., Diaz-Bilello, E., Elder, E., Sepulveda, A., Blankenheim, A., & Board, L. (2021). Academic Coaching and its Relationship to Student Performance, Retention, and Credit Completion. *Innovative Higher Education*, 46(5), 539–563. <https://doi.org/10.1007/s10755-021-09554-w>
- American Psychological Association. (n.d.). Ex post facto design. In *APA Dictionary of Psychology*. <https://dictionary.apa.org/ex-post-facto-design>
- American Psychological Association. (2019). *Gender*. <http://apastyle.apa.org/style-grammar-guidelines/bias-free-language/gender>
- American Psychological Association. (n.d.). Quantitative research. In *APA Dictionary of Psychology*. <https://dictionary.apa.org/quantitative-research>
- Ardoin, S. (2018). Helping Poor- and Working-Class Students Create Their Own Sense of Belonging. *New Directions for Student Services*, 162, 75–86.
- Ashta, J. K., Weingart, R., & Gazmararian, J. A. (2023). The Impact of COVID-19 on Education Experiences of High School Students in Semi-Rural Georgia. *Journal of School Health*, 93(4), 257–265. <https://doi-org.ezproxy.andrews.edu/10.1111/josh.13269>
- Banks, T., & Dohy, J. (2019). Mitigating Barriers to Persistence: A Review of Efforts to Improve Retention and Graduation Rates for Students of Color in Higher Education. *Higher Education Studies*, 9(1), 118–131.
- Barclay, T.H., Barclay, R.D., Mims, A., Sargent, Z., & Robertson, K. (2018). *Academic Retention: Predictors of College Success, Education*, 139 (2), 59-70. Retrieved from

<http://search.ebscohost.com.ezproxy.andrews.edu/login.aspx?direct=true&db=a9h&AN=134289377&site=ehost-live&scope=site>

- Beasley, S. T., Vandiver, B. J., Dillard, R., Malone, W., & Ott, R. (2020). The Development of an Academic Engagement Intervention for Academically Dismissed Students. *Innovative Higher Education, 45*(5), 387–403. <https://doi.org/10.1007/s10755-020-09510-0>
- Blagg, K., & Blom, E. (2018). *Evaluating the return on investment in higher education: an assessment of individual- and state-level returns*. Urban Institute.
- Bowering, E., Mills, J., Merritt, A. (2017). Learning How to Learn: A Student Success Course for At Risk Students. *The Canadian Journal for the Scholarship of Teaching and Learning, 8*(3).
- Bowman, N. A., Jang, N., Kivlighan III, D. M., Schneider, N., & Ye, X. (2020). The Impact of a Goal-Setting Intervention for Engineering Students on Academic Probation. *Research in Higher Education, 61*(1), 142–166. <https://doi-org.ncat.idm.oclc.org/10.1007/s11162-019-09555-x>
- Brookover, D. L., Hanley, E. M., Boulden, R., & Johnson, K. F. (2021). “I Want to Be a First”: Student, Family, and School Factors Influencing First-Generation Student College Readiness. *School Community Journal, 31*(1), 41–64.
- Brower, R. L., Nix, A. N., Daniels, H., Hu, X., Jones, T. B., & Hu, S. (2021). A Pedagogy of Preparation: Helping Underprepared Students Succeed in College-Level Coursework in Community Colleges. *Innovative Higher Education, 46* (2), 153–170. <https://doi.org/10.1007/s10755-020-09531-9>
- Bryant. (2024, January 12). *HBCU facts and statistics*. BestColleges.com. <https://www.bestcolleges.com/research/hbcu-facts/>
- Cabrera, N., Miner, D., & Milem, J. (2013). Can a Summer Bridge Program Impact First-Year Persistence and Performance? A Case Study of the New Start Summer Program. *Research in Higher Education, 54*(5), 481–498. <https://doi.org/10.1007/s11162-013-9286-7>
- Casey, M. D., Cline, J., Ost, B., & Qureshi, J. A. (2018). Academic Probation, Student Performance, and Strategic Course-Taking. *Economic Inquiry, 56*(3), 1646–1677. <https://doi-org.ncat.idm.oclc.org/10.1111/ecin.12566>
- Caviglia-Harris, J., & Maier, K. (2020). It’s not all in their heads: the differing role of cognitive factors and non-cognitive traits in undergraduate success. *Education Economics, 28*(3), 245–262. <https://doi.org/10.1080/09645292.2020.1729702>
- Chiteng Kot, F. (2014). The Impact of Centralized Advising on First-Year Academic Performance and Second-Year Enrollment Behavior. *Research in Higher Education, 55*(6), 527–563. <https://doi.org/10.1007/s11162-013-9325-4>

- Cholewa, B., & Ramaswami, S. (2015). The Effects of Counseling on the Retention and Academic Performance of Underprepared Freshmen. *Journal of College Student Retention: Research, Theory & Practice*, 17(2), 204–225. <https://doi.org/10.1177/1521025115578233>
- College Possible. (2018, August 23). The economic impact of college degrees – college possible. Retrieved from <http://www.collegepossible.org/news/the-economic-impact-of-college-degree-holders/>
- Collings, R. D., & Eaton, L. G. (2021). The Study Place Project: Using Reciprocal Determinism to Improve First-Year College GPA and Retention. *College Student Journal*, 55(1), 89–103.
- Connolly, S., Flynn, E. E., Jemmott, J., & Oestreich, E. (2017). First Year Experience for At-Risk College Students. *College Student Journal*, 51(1), 1–6.
- Content Validity: Definition, Index & Examples. (2015, July 14). Retrieved from <https://study.com/academy/lesson/content-validity-definition-index-examples.html>.
- Creswell, J. W., & Guetterman, T.C. (2019). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (6th ed.). New York, NY: Pearson College Division.
- Dictionary.com. (n.d.). Gender. <https://www.dictionary.com/browse/gender>
- Dictionary.com. (n.d.). Socioeconomic status. <https://www.dictionary.com/browse/socioeconomic-status>
- Douglas, D., & Attewell, P. (2014). The Bridge and the Troll Underneath: Summer Bridge Programs and Degree Completion. *American Journal of Education*, 121(1), 87–109. <https://doi.org/10.1086/677959>
- Engle, J., & Tinto, V. (2008). *Moving beyond access: College success for low-income, first-generation students*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.
- Farmer, E. D., & Hope, W. C. (2015). Factors That Influence African American Male Retention and Graduation: The Case of Gateway University, a Historically Black College and University. *Journal of College Student Retention: Research, Theory & Practice*, 17(1), 2–17. <https://doi.org/10.1177/1521025115571074>
- Flynn, D. (2014). Baccalaureate Attainment of College Students at 4-Year Institutions as a Function of Student Engagement Behaviors: Social and Academic Student Engagement Behaviors Matter. *Research in Higher Education*, 55(5), 467–493. <http://www.jstor.org/stable/24571792>

- Fox, J. R., & Martin, H. E. (2017). Academic Advising and the First College Year. National Resource Center for The First-Year Experience.
- Gebauer, R. (2019). The Critical Nature of Intentionality When Supporting Academically Underprepared Students through Learning Communities. *Learning Communities: Research & Practice*, 7(1).
- Glessner, K. (2015). Only the Best Need Apply? *Journal of College Admission*, 226, 30–33.
- Grace-Odeleye, B., & Santiago, J. (2019). A Review of Some Diverse Models of Summer Bridge Programs for First-Generation and At-Risk College Students. *Administrative Issues Journal: Connecting Education, Practice, and Research*, 9(1), 35–47.
- Guarneri, J. A., & Connolly, S. (2019). Exploring the Transformative Capabilities of First-Year Seminars. *College Student Journal*, 53(1), 56–70.
- Gonzalez, V. (2022). The Cost of Academic Dismissal and Attrition from Students on Academic Probation. *New Directions for Higher Education*, 198, 75–85. <https://doi.org/10.1002/he.20444>
- Jolliffe, I.A., & Cadima, J. (2016). Principal component analysis: a review and recent developments. *Philosophical Transactions of the Royal Society A*, 34(2065). <https://doi.org/10.1098/rsta.2015.0202>
- Hamman, K. J. (2018). Factors That Contribute to the Likelihood of Academic Recovery. *Journal of College Student Retention: Research, Theory & Practice*, 20(2), 162–175.
- Hanover Research. (2014). *Strategies for improving student retention*. <https://www.hanoverresearch.com/media/Strategies-for-Improving-Student-Retention.pdf>
- Hanson, M. (2021, November 22). *College dropout rates*. EducationData. <https://educationdata.org/college-dropout-rates>
- Hanson, M. (2021, November 30). *Total student loan debt [2021]: Federal vs private (by year)*. EducationData. <https://educationdata.org/total-student-loan-debt>
- Harrington, C., & Orosz, T. (2018). *Why the first-year seminar matters: Helping students choose and stay on a career path*. Rowman & Littlefield.
- Hughes, A. N., Gibbons, M. M., & Mynatt, B. (2013). Using Narrative Career Counseling with the Underprepared College Student. *Career Development Quarterly*, 61(1), 40–49. <https://doi.org/10.1002/j.2161-0045.2013.00034.x>

- Holmes, D. L., & Slate, J. R. (2017). Differences in GPA by gender and ethnicity/race as a function of first-generation status for community college students. *Global Journal of Human-Social Science Research*, 17(3), 1.
- Horton, J. (2015). Identifying at-risk factors that affect college student success. *International Journal of Process Education*, 7(1).
<https://www.ijpe.online/2015/risk.pdf>
- Hotchkins, B. K., & Dancy, T. E. (2015). Rethinking Excellence: Black Male Success and Academic Values in Higher Education. *Spectrum: A Journal on Black Men*, 4(1), 73–98. <https://doi.org/10.2979/spectrum.4.1.05>
- Howard, J. S., & Flora, B. H. (2015). A comparison of student retention and first year programs among liberal arts colleges in the mountain south. *Journal of Learning in Higher Education*, 11(1), 67-84.
- Kalinowski Ohrt, E. (2016). Proactive Advising with First-Generation Students: Suggestions for Practice. *Mentor: An Academic Advising Journal*, 1.
- Kang, A., Hoskova, B., Liu, C. Y., Viddyakorn, A., Binder, M., Liang, B., & Lai, B. S. (2023). Students of Color and COVID-19: Experiences, Coping Strategies, and Supports. *Journal of Educational Research and Practice*, 13(1), 345–364.
- Kent State University Libraries. (2017, May 15). *SPSS tutorials: Independent samples t test*. Retrieved January 30, 2022, from <http://libguides.library.kent.edu/SPSS/IndependentTTest>
- Kezar, A., Kitchen, J. A., Cole, D., Newman, C. B., & Hypolite, L. I. (2020). Sense of Belonging and Mattering Among Two Cohorts of First-Year Students Participating in a Comprehensive College Transition Program. *American Behavioral Scientist*, 64(3), 276–297. <https://doi.org/10.1177/0002764219869417>
- Kognito. (2015). *Increasing student retention through improved mental health* [White paper].
https://www.cmich.edu/veterans/Documents/HiEd_WP_032117_StudentRetentionWP.pdf
- Lærd Statistics. (2018). *Descriptive and inferential statistics*.
<https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php>
- Lærd Statistics. (2018.). *How to perform a binomial logistic regression in SPSS statistics*.
<https://statistics.laerd.com/spss-tutorials/binomial-logistic-regression-using-spss-statistics.php>
- Ledwith, K.E. (2014), Academic Advising and Career Services: A Collaborative Approach. *New Directions for Student Services*, 2014: 49-63. <https://doi.org/10.1002/ss.20108>

- Lee, L. E., Rinn, A. N., Crutchfield, K., Ottwein, J. K., Hodges, J., & Mun, R. U. (2021). Perfectionism and the imposter phenomenon in academically talented undergraduates. *Gifted Child Quarterly*, 65(3), 220-234. <https://doi.org/10.1177/0016986220969396>
- Lee, M. L. (2021). *SCS:099—Strategies for Academic Success* [Syllabus]. Center for Academic Excellence, North Carolina Agricultural & Technical State University.
- León, M. B., Guest-Scott, A., Koke, A., Fiorini, S., & Rangazas, A. (2019). Claiming Their Education: The Impact of a Required Course for Academic Probation Students with a Focus on Purpose and Motivation. *Journal of the Scholarship of Teaching and Learning*, 19(4), 43–57.
- Li, A. Y. (2018, October 29). *Lessons learned: A case study of performance funding in higher education – Third way*. Third Way. <https://www.thirdway.org/report/lessons-learned-a-case-study-of-performance-funding-in-higher-education>
- Lobosco, K. (2017, October 25). *College tuition is still getting more expensive*. CNNMoney. <https://money.cnn.com/2017/10/25/pf/college/college-tuition-price-2017-2018/index.html>
- Lynch, J., & Lungrin, T. (2018). Integrating Academic and Career Advising toward Student Success. *New Directions for Higher Education*, 2018(184), 69–79. <https://doi.org/10.1002/he.20304>
- MacInnes, J. (2020). Secondary Analysis of Quantitative Data. In P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, & R.A. Williams (Eds.), *SAGE Research Methods Foundations*. <https://www.doi.org/10.4135/9781526421036870195>
- Maintaining Database Reliability, Integrity & Safety. (2020, March 14). <https://study.com/academy/lesson/maintaining-database-reliability-integrity-safety.html>
- Manyaga, F., Sithole, A., & Hanson, S. M. (2017). Comparison of student retention models in undergraduate education from the past eight decades. *Journal of Applied Learning in Higher Education*, 7, 29-41.
- Martin, E. M. (2021). College Student Self-Care: A Journey, not a Destination. *College Student Journal*, 55(2), 208–218.
- McGrath, S. M., & Burd, G. D. (2012). A Success Course for Freshmen on Academic Probation: Persistence and Graduation Outcomes. *NACADA Journal*, 32(1), 43–52.
- McNeely, J. H. (1937). *College student mortality*. U.S. Office of Education, Bulletin 1937, no. 11. Washington, D.C.: U.S. Government Printing Office.

- Mellor, D. T., Brooks, W. R., Gray, S. A., & Jordan, R. C. (2015). Troubled Transitions Into College and the Effects of a Small Intervention Course. *Journal of College Student Retention: Research, Theory & Practice*, 17(1), 44-63.
- Millea, M., Wills, R., Elder, A., & Molina, D. (2018). What matters in college student success? Determinants of college retention and graduation rates. *Education*, 138(4), 309-322.
- Molock, S. D., & Parchem, B. (2022). The Impact of COVID-19 on College Students from Communities of Color. *Journal of American College Health*, 70(8), 2399–2405.
<https://doi-org.ezproxy.andrews.edu/10.1080/07448481.2020.1865380>
- Moran, M. (2021, August 3). *Chi-square test of independence*. Statistics Solutions.
<https://www.statisticssolutions.com/free-resources/directory-of-statistical-analyses/chi-square/>
- Morse, R. (2021, September 12). *How to Use the Best Colleges Rankings Wisely*. U.S. News & World Report. <https://www.usnews.com/education/best-colleges/articles/how-to-use-the-rankings-wisely>
- NASPA. (n.d.). *Defining first-generation*. Center for First-generation Student Success.
<https://firstgen.naspa.org/blog/defining-first-generation>
- National Center for Education Statistics. (n.d.) *Fall Enrollment (EF) Glossary*. U.S. Department of Education.
- National Center for Education Statistics. (2019). The condition of education 2019 (NCES 2019-144). U.S. Department of Education.
<https://nces.ed.gov/pubs2019/2019144.pdf>
- National Center for Education Statistics. (2019). *Indicator 7: Racial/Ethnic Concentration in Public Schools*.
https://nces.ed.gov/programs/raceindicators/indicator_rbe.asp
- National Center for Education Statistics. (2019). *Indicator 23: Postsecondary graduation rates*. https://nces.ed.gov/programs/raceindicators/indicator_red.asp
- National Center for Education Statistics. (2020). The condition of education 2020 (NCES 2020-144). U.S. Department of Education.
<https://nces.ed.gov/pubs2020/2020144.pdf>
- National Center for Education Statistics. (2021). *COE - Undergraduate retention and graduation rates*. National Center for Education Statistics (NCES), a part of the U.S. Department of Education. <https://nces.ed.gov/programs/coe/indicator/ctr>

- National Center for Education Statistics. (2023). Racial/Ethnic Enrollment in Public Schools. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/programs/coe/indicator/cge>
- Noel-Levitz Inc. (2008). Noel-Levitz Retention Codifications Student Success, Retention, and Graduation: Definitions, Theories, Practices, Patterns, and Trends. <https://www.stetson.edu/law/conferences/highered/archive/media/Student%20Success,%20Retention,%20and%20Graduation-%20Definitions,%20Theories,%20Practices,%20Patterns,%20and%20Trends.pdf>
- O’Keeffe, P. (2013). A Sense of Belonging: Improving Student Retention. *College Student Journal*, 47(4), 605–613.
- Palmer, R. T., Wood, J. L., & Arroyo, A. (2015). Toward a Model of Retention and Persistence for Black Men at Historically Black Colleges and Universities (HBCUs). *Spectrum: A Journal on Black Men*, 4(1), 5–20. <https://doi.org/10.2979/spectrum.4.1.02>
- Peteet, B. J., Montgomery, L., & Weekes, J. C. (2021). Predictors of Imposter Phenomenon among Talented Ethnic Minority Undergraduate Students. *Journal of Negro Education*, 84(2), 175–186. <https://doi.org/10.7709/jnegroeducation.84.2.0175>
- Pringle, A. A., DeBaun, B., Melnick, S., & National College Access Network (NCAN). (2017). Connecting College and Career Success: Lessons on Advising, Data, and Partnerships. In *National College Access Network*. National College Access Network.
- Ordinary least squares regression. (n.d.). In *International Encyclopedia of the Social Sciences*. <https://www.encyclopedia.com/social-sciences/applied-and-social-sciences-magazines/ordinary-least-squares-regression>
- Quinn, D. E., Cornelius-White, J., MacGregor, C., & Uribe-Zarain, X. (2019). The Success of First-Generation College Students in a TRIO Student Support Services Program: Application of the Theory of Margin. *Critical Questions in Education*, 10(1), 44–64.
- Ramsey, E., & Brown, D. (2018). Feeling like a fraud: Helping students renegotiate their academic identities. *College & Undergraduate Libraries*, 25(1), 86–90. <https://doi.org/10.1080/10691316.2017.1364080>
- Ricks, J. R., & Warren, J. M. (2021). Experiences of Successful First-Generation College Students with College Access. *Journal of School Counseling*, 19(8), 1–35.
- Roble, J. (2017). Financial Barriers to College Completion. Poverty Fact Sheet. No. 12, 2017.

- Sabay, S., & Wiles, K. (2020). How TRIO enhances equity for community college transfer students. *New Directions for Community Colleges*, 2020(192), 109–119. <https://doi.org/10.1002/cc.20428>
- Salkind, N. J. (2010). *Encyclopedia of research design* (Vols. 1-0). Sage. <https://doi.org/10.4135/9781412961288>
- Schwitzer, A. M., Moss, C. B., Pribesh, S. L., St John, D. J., Burnett, D. D., Thompson, L. H., & Foss, J. J. (2018). Students with mental health needs: College counseling experiences and academic success. *Journal of College Student Development*, 59(1), 3-20. <https://doi.org/10.1353/csd.2018.0001>
- Schwebel, D. C., Walburn, N. C., Klyce, K., & Jerrolds, K. L. (2012). Efficacy of Advising Outreach on Student Retention, Academic Progress and Achievement, and Frequency of Advising Contacts: A Longitudinal Randomized Trial. *NACADA Journal*, 32(2), 36–43. <https://doi.org/10.12930/0271-9517-32.2.36>
- Seidman, A. (2012). *College Student Retention: Formula for Student Success*. Rowan & Littlefield.
- Shoulders, C., Simmons, L. M., & Johnson, D. M. (2020). Pre-Entry Attributes and Freshman Satisfaction, Grades, and Engagement as Predictors of Six-Year College Graduation. *College Student Journal*, 54(3), 327–338.
- Soria, K. M., Weiner, B., & Lu, E. C. (2014). Financial decisions among undergraduate students from low-income and working-class social class backgrounds. *Journal of Student Financial Aid*, 44(1), 1–22.
- Soysal, D., Bani-Yaghoub, M., & Riggers-Piehl, T. A. (2022). Analysis of Anxiety, Motivation, and Confidence of STEM Students during the COVID-19 Pandemic. *International Electronic Journal of Mathematics Education*, 17(2).
- Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1(1), 64-85. <https://doi.org/10.1007/BF02214313>
- Spady, W. G. (1971). Dropouts from higher education: Toward an empirical model. *Interchange*, 2(3), 38–62.
- Stein, C. (2018, July 23). *The push for higher education: College attrition rates*. PA Times: American Society for Public Administration. <https://patimes.org/the-push-for-higher-education-college-attrition-rates/>
- Student Handbook: North Carolina Agricultural and Technical State University. (2023-2024). <https://www.ncat.edu/campus-life/pdfs/2023-2024-student-handbook.pdf>
- Strayhorn, T. L. (2014). What Role Does Grit Play in the Academic Success of Black Male Collegians at Predominantly White Institutions? *Journal of African American Studies*, 18(1), 1–10. <http://www.jstor.org/stable/43525531>

- Summerskill, J. (1962). Dropouts from college. *The American college: A psychological and social interpretation of the higher learning*, 627-657.
<https://doi.org/10.1037/11181-019>
- Sun, J. C. Y., Oh, Y. J., Seli, H., & Jung, M. (2017). Learning Behavior and Motivation of At-Risk College Students: The Case of a Self-Regulatory Learning Class. *Journal of At-Risk Issues*, 20(2), 12-24.
- Swecker, H. K., Fifolt, M., & Searby, L. (2013). Academic advising and first-generation college students: A quantitative study on student retention. *NACADA Journal*, 33(1), 46–53. <https://doi.org/10.12930/NACADA-13-192>
- Tamborini, C. R., Kim, C., & Sakamoto, A. (2015). Education and lifetime earnings in the United States. *Demography*, 52(4), 1383-1407.
<https://doi.org/10.1007/s13524-015-0407-0>
- The Career Leadership Collective. (2021). *Integrating career advising for equitable student success*. American Association of State Colleges and Universities.
https://www.aascu.org/uploadedFiles/AASCU/Content/Root/AcademicAffairsPrograms/AASCU_CLC_Career%20Advising.pdf
- The Glossary of Education Reform. (2013, August 29). *At-risk*.
<https://www.edglossary.org/at-risk/>
- The Glossary of Education Reform. (2014, March 5). *Bloom's taxonomy definition*. <https://www.edglossary.org/blooms-taxonomy/>
- Thurgood Marshall College Fund. (2019, July 22). *New tactics needed to fix low HBCU graduation rates*.
<https://www.tmcf.org/events-media/tmcf-in-the-media/new-tactics-needed-to-fix-low-hbcu-graduation-rates/>
- Tierney, W.G., Duncheon, J. (2015). *The Problem of College Readiness*. SUNY Press.
- Tinto, V. (1975). Dropouts from Higher Education: A Theoretical Synthesis of Recent Research. *Review of Educational Research*, 45, 89-125.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2nd ed.). Chicago: University of Chicago Press.
- Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention: Research, Theory and Practice*, 5(1), 1-19.
<https://doi.org/10.2190/4YNU-4TMB-22DJ-AN4W>
- Tinto, V. (2010). From theory to action: Exploring the institutional conditions for student retention. *Higher Education: Handbook of Theory and Research*, 25, 51-89.
https://doi.org/10.1007/978-90-481-8598-6_2

- Trostel, P. (2015). *It's not just the money: the benefits of college education to individuals and society*. Lumina Foundation.
<https://www.luminafoundation.org/files/resources/its-not-just-the-money.pdf>
- Undergraduate Bulletin of North Carolina Agricultural and Technical State University (2021-2022). <https://www.ncat.edu/provost/academic-affairs/bulletins/2021-22undergraduatebulletin.pdf>
- U.S. Department of Education. (n.d.). *College affordability and completion: Ensuring a pathway to opportunity*. <https://www.ed.gov/college>
- U.S. Department of Education. (2021). *Federal Student Aid*. [online] Studentaid.gov.
<https://studentaid.gov/help/graduation-retention-transfer-rates>
- U.S. Department of Education. (n.d.). *Federal Student Aid*. [online] Studentaid.gov.
<https://studentaid.gov/help-center/answers/topic/glossary/article/federal-pell-grant-program>
- U.S. Department of Education. (2022). Institute of Education Sciences, National Center for Education Statistics. <https://nces.ed.gov/help/>
- U.S. Department of Education. (2020). *Student support services program*.
<https://www2.ed.gov/programs/triostudsupp/index.html>
- Van Duser, K. E., Lucas, C., & Cohen, S. (2020). The Influence of Rising Tuition on First-Year Students' Enrollment and Persistence Intentions. *College Student Journal*, 54(4), 421–430.
- Vaughan, A. L., Dorn, B., Rose, J. S., Ward, C., & Hauck, A. A. (2020). Intersection Between TRIO/SSS Programs and FYS: Effects on First-Generation Students. *Journal of Higher Education Theory & Practice*, 20(15), 126–138.
<https://doi.org/10.33423/jhetp.v20i15.3942>
- Verbree, A. R., Hornstra, L., Maas, L., & Wijngaards-de Meij, L. (2023). Conscientiousness as a Predictor of the Gender Gap in Academic Achievement. *Research in higher education*, 64(3), 451–472. <https://doi.org/10.1007/s11162-022-09716-5>
- Warrens, M. J. (2015) On Cronbach's Alpha as the Mean of All Split-Half Reliabilities. In: Millsap, R.E., Bolt D.M., Ark L.A, Wang, W. *Quantitative Psychology Research. Springer Proceedings in Mathematics & Statistics*, vol 89. Springer.
https://doi.org/10.1007/978-3-319-07503-7_18
- Westrick, P. A., Le, H., Robbins, S. B., Radunzel, J. M. R., & Schmidt, F. L. (2015). College Performance and Retention: A Meta-Analysis of the Predictive Validities of ACT Scores, High School Grades, and SES. *Educational Assessment*, 20(1), 23–45. <https://doi.org/10.1080/10627197.2015.997614>

- Wittrup, A., Hussain, S., Albright, J., Hurd, N. M., Varner, F., & Mattis, J. (2016). Natural mentors, racial pride, and academic engagement among Black adolescents: A study of resilience in the context of perceived discrimination. *Youth & Society*, 1-21. <https://doi.org/10.1177/0044118X16680546>
- Williams, R., Smiley, E., Davis, R., & Lamb, T. (2018). The Predictability of Cognitive and Non-cognitive Factors on the Retention Rate among Freshmen College Students. *Journal of Negro Education*, 87(3), 326–337. <https://doi.org/10.7709/jnegroeducation.87.3.0326>
- Wu, Z. (2019). Academic Motivation, Engagement, and Achievement among College Students. *College Student Journal*, 53(1), 99–112.
- Xiao, M., Bradley, K. D., & Lee, J. (2020). Exploring the Relationship between Student Involvement and First-to-second Year Retention at Four-year Postsecondary Institutions. *Mid-Western Educational Researcher*, 32(3), 191–205.
- Xu, C., Wang, X., & Zou, Y. (2023). Exploration of college students' psychological problems based on online education under COVID-19. *Psychology in the Schools*, 60, 3716–3737. <https://doi.org/10.1002/pits.22955>
- Xu, Y. (2017). Localizing College Retention Efforts: The Distance between Theoretical Orientation and Institution-Specific Needs. *Innovative Higher Education*, 42(1), 49–63. <https://doi.org/10.1007/s10755-016-9364-9>
- York, T. T., Gibson, C., & Rankin, S. (2015). Defining and Measuring Academic Success. *Practical Assessment, Research & Evaluation*, 20(5–7), 1–20.

VITAE OF MADELINE MARTÍNEZ

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PROFILE STATEMENT

- Higher education professional with a diverse background encompassing leadership, project initiation, development and management founded on an unparalleled commitment to student success.
- Excellent strategic organizational planning and coordination strengths for successful and timely completion of complex programs.
- Solution-oriented leader possessing empathy, interpersonal and communication skills with ability to identify needs and foster growth.

EDUCATION

Ph.D. Candidate- Higher Education Administration- Andrews University, Berrien Springs, MI	2024
• Dissertation (in progress): The Relationship between Participation in a Student Success Course and the Retention Rate and Academic Success of First-Year Freshmen at a Historically Black University	
• Global (International) Focus Middle Eastern Study Abroad 2-Week Tour: Egypt, Israel, Jordan	2022
M.A. in Human Behavior & Organizational Psychology - Kean University, Union, NJ	2012
• Thesis: Self-Efficacy, Performance, Socioeconomic Status, and Retention. Promoting Academic Success and Degree Attainment Behavior in Post-Secondary Education	
Bachelor of Arts in Spanish Studies – Andrews University, Berrien Springs, MI	2010
• Global (International) Focus South American Study Abroad 1-Month Tour- Argentina, Brazil, Chile, Peru	2010
European & African Study Abroad 1-Month Tour- Italy, Greece, Morocco, Spain	2009

WORK EXPERIENCE

North Carolina Agricultural & Technical State University, Greensboro, NC

Center for Academic Excellence

Interim Associate Director

06/2022- present

- Supervise and provide direction for the Center for Academic Excellence in the absence of and support of the Executive Director
- Manage a variety of academic support activities with primary emphasis on academic advising and direct supervision of academic advisor staff and services
- Develop and maintain positive working relationships with faculty and staff within the department, as well as foster collaboration with campus partners and external stakeholders to drive student success

Lecturer- Center for Academic Excellence
12/2022

08/2019-

- Taught multiple sections of FRST101: College Success to undergraduate students within various disciplines in a virtual or in-person format
- Engaged students with campus resources to foster learning opportunities both inside and outside of the classroom that promote their social and academic integration, while enhancing their navigational capital
- Empower students to transition from high school to higher education by facilitating learning opportunities centered on personal, academic, and professional goals
- Employ diagnostic, formative, and summative learning assessments to identify students' level of mastery of concepts and course objectives
- Facilitate student meetings and office hours to discuss course materials and referral to campus resources such as tutoring services, mentoring opportunities, career services, academic advising, counseling services, and student organizations based on students' needs
- Create course materials and presentations in collaboration with FRST101 Coordinator and instructors to promote student engagement and success
- Proven track record of average of 90-94% pass rate of 'C' or higher across all sections taught (22 sections in total)

Program Coordinator- S.I.S.T.E.R.S. Living Learning Community
(Students Inspiring Success Through Education, Retention, and Service)
08/2019- 06/2022

- Developed a revised application and selection process of program participants to promote equitable access to academic resources for eligible students
- Created a handbook and training materials designed for peer-mentors to promote the development of their leadership skills, effective mentoring practices, and cultural competency
- Create, develop, and facilitate personal, academic, and professional development workshops, bonding/networking events, and civic engagement opportunities to meet program objectives
- Provide academic advising and academic coaching services to program participants across various disciplines to promote their academic success and make referrals to resources as necessary
- Collaborate with the Housing & Residence Life Department to facilitate a successful transition of program participants into their living learning community by communicating and enforcing requirements and expectations for student conduct and responsibilities

Berkeley College, Woodbridge, NJ
Dual Academic Advisor- Academic Advisement
Department

09/2016- 08/2019

- Appointed to fulfill the dual role of advising a blended cohort consisting of onsite undergraduate students, as well as online graduate students (only role of its kind among over 25 advisors), given proven track record of student retention and student engagement best practices
- Created the Master's in Business Administration Program Manual to streamline academic advisement practices and procedures, as well as inform registrar functions impacting student enrollment, academic standing, Satisfactory Academic Progress (SAP), readmission process, and graduation requirements

- Mediated graduate student grievances, presented concerns, and proposed solutions to the faculty and Dean of Graduate Studies as part of the department's student success objectives
- Interpreted the academic advisement audit and registered new and continuing undergraduate and graduate students in appropriate courses based on skill level, eligibility, degree program, and academic goals

Berkeley College, Newark, NJ

Academic Mentor (Program Initiative) - Academic Advisement

Department 08/2015- 09/2016

- Created and presented a student retention proposal to the Campus Operating Officer and Retention Committee, which resulted in the implementation of strategic first-year programming
- Provided a supportive and collaborative mentoring experience for first time, full-time students as they entered, persisted, and completed their first year of undergraduate studies
- Conducted information, mentoring, coaching, and training sessions for students to develop and implement plans for student success
- Supported each student holistically via discussions including readiness, family/home life and support systems, work requirements, and learning needs
- Worked collaboratively as a critical member of the retention team with various departments- admissions, academic advisement, faculty, career services, academic chairs, registrar's office, and financial services to ensure students had a successful college experience
- Supported student engagement in activities that fostered a sense of belonging in the campus community; facilitated productive and positive interaction between students and faculty and staff

Berkeley College, Newark, NJ

Career Counselor- Career

Services

08/2013-08/2015

- Conducted individual and group counseling sessions to assist students and alumni in making informed career decisions through occupational exploration and the career decision-making process
- Coached students and alumni in self-directed job search strategies and personal branding techniques such as resume writing, cover/thank you letter formatting, and the development of interview skills
- Marketed recruitment services and developed partnerships with employers to engage their participation in online job listing service, internship opportunities, resume referral, on-campus interviews, career fairs, and networking events
- Collaborated with faculty to support the Career Management Seminar courses by conducting in-class presentations on career management, professional development, and department resources to assist students
- Coordinated logistical and administrative details of outreach programs for students, faculty, and employers such as workshops, seminars, internship orientation sessions, and special events
- Developed partnerships with on-campus departments and community-based non-profit organizations to engage their participation in the Federal Work Study program

AWARDS, PROFESSIONAL ACCOMPLISHMENTS, CERTIFICATIONS

- 2016 Associate of the Year Award Recipient (1 of 3 award recipients in Adaptability Category)
- Appointed as Retention Committee representative for the Woodbridge Campus Academic Advisement Department
- Member of the 2021 & 2022 Professional Development Day Committee at N.C. A&T
 - Proposed the selected theme- ‘Aggie Pride Personified’ (2021)
 - Co-collaborator of PDD video-writer of PDD video script (2021)
- Certified Trainer- Bringing the Aggie Experience to Life (2023)

PRESENTATIONS

- University Student Success Office Enrichment Series
 - Presenter: Clarifying Advising Roles (February 2024)
- Board of Trustees
 - Presenter: Centralized Academic Advising and The Aggie Experience Training (October 2023)
- Anthology- Strategic Leadership Summit
 - Panelist: Student Success Webinar (November 2023)
- Office of Accessibility Resources
 - Presenter: Effective Management Skills (August 2023)
- The Aggie Success Academy
 - Moderator: Career Panel (June 2023)
- Andrews University Women’s Leadership Conference- Agents of Change
 - Presenter: Higher Level Leadership (June 2023)
- Bringing the Aggie Experience to Life Launch Celebration
 - Presenter: Train-the-Trainer Initiative (May 2023)
- University Innovation Alliance Conference- Lightning Talks
 - Presenter- Predictive Analytics and Student Success (April 2023)
- R2 to R1 Undergraduate Research Team (Member)
 - Moderator: A Taste of Aggie Research- Panel (April 2023)
- Board of Trustees
 - Presenter: Centralized Academic Advisement at NCATSU (February 2023)

TECHNICAL SKILLS

Bilingual:	Spanish (native speaker)- verbal and written mastery
Software:	Windows, Apple, Microsoft Office (Word, Excel, PowerPoint, Outlook), Zoom, Blackboard, Canvas, EAB Navigate, GradesFirst, Salesforce, Oracle PeopleSoft, Banner, Predictive Analytics-Civitas Illume, Insight Platform

