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# Association Among Student Retention and Program Utilization Within an Independent Community College in Northeastern New Mexico

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*Walden University*

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# Walden University

College of Education

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Geno Castillo

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Walden University  
2024

Abstract

Association Among Student Retention and Program Utilization Within an Independent  
Community College in Northeastern New Mexico

by

Geno Castillo

MS, New Mexico Highlands University, 2015

BA, New Mexico Highlands University, 2012

Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Education

Walden University

May 2025

## Abstract

The problem investigated in this study was the trend of decreasing student retention of first-year, degree-seeking college students at an independent community college located in northeastern New Mexico. The purpose of the study was to examine the association between student retention and program utilization. The research question was to determine if statistically significant differences existed between first-year students at an independent community college in northeastern New Mexico who did and did not utilize government-funded tutoring programs, which is a peer-led program managed by the Center for Academic Excellence. The theoretical foundation for the study was Tinto's student retention theory model. Random sampling was used to select 80 degree-seeking students from the 2021 cohort. A Chi-Square Test of Association was conducted on the archival to determine if there was any statistically significant difference between first-year students who did and did not utilize first-year programs. An analysis of first-year, full-time student data from the study site demonstrated that first-year, full-time students did not differ among students who utilized government-funded tutoring programs. Further examination of student retention is recommended. Efforts to improve retention must have strategies to improve student success. The findings could possibly result in positive social change through aiding institutional education leaders to have a better understanding of how declining student retention rates are related to utilization or nonutilization of first-year programs. This could potentially help to enhance institutional efforts to support and develop successful first-year programs that may assist and empower students, so they remain at the institution to continue towards their educational goals.

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## Dedication

This work is dedicated to my parents Ignacia V. Castillo and father Roger A. Castillo U.S. Army (deceased) for always believing in me to finish my bachelor's and master's degrees and now completing a doctoral degree. They were always confident that I will be successful, no matter what I am doing. I thank both of them very much for their enduring and unselfish support, without which this study could have been undertaken. To my family and friends, professors, and fellow students who gave their help and support throughout this production, and anybody that is interested in the amazing world of education, I dedicate this brilliant work of education. I hope you enjoy reading it as much as I have enjoyed writing it. Enjoy!

Geno Castillo

Las Vegas, New Mexico

July 10, 2022

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My favorite quote is “If music be the food of physics, play on” from William Shakespeare’s *Twelfth Night*.

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## Chapter 1: Introduction to the Study

Community colleges have provided opportunities for many first-generation, low-income, and underrepresented groups of students (Watson & Chen, 2019), and therefore, a more diverse ethnic population attends a community college. Because a broad range of ethnically diverse students attend community colleges, supporting their successful attainment of an associate degree allows for increased diversity among individuals in potential future key leadership positions. Unfortunately, community colleges have experienced low retention rates. According to the institutional report (IR) for the study site, an independent community college in northeastern New Mexico, among the 2017 cohort (based on the Institutional Postsecondary Education Data System [IPEDS] 2019 report) the first-year student retention rate was 48%. The following year's report from the 2018 cohort (based on the IPEDS 2020 report) stated that the first-year student retention rate was 47%, and the 2019 cohort (based on the IPEDS 2021 report) had a first-year student retention rate of 43% (National Center for Education Statistics, 2022). Efforts have been made to address the issue of student retention in institutions; however, the problem continues to intensify even though colleges devote a sizable portion of student support programs towards the first-year students in hopes of increasing student retention and graduation rates (Caballero, 2020). There was a need to conduct research to understand why the first-year programs are not helping students in the first year at community colleges to be successful. Positive social change will be realized through providing institutional education leaders with a better understanding of how declining student retention rates are related to utilization or nonutilization of first-year programs.

This could potentially help to enhance institutional efforts to support and develop successful first-year programs that may support and empower students in ways to help them to remain at the institution to continue towards their educational goals.

In Chapter 1, the background related to the scope of this study, a description of the problem study addressed, the purpose of the study, and the research question (RQ) and corresponding hypotheses (null and alternate) that guided this study are presented. I also describe the theoretical foundation for the study, the nature of the study, and variables. Finally, the assumptions, scope, delimitations, limitations, and significance of the study are discussed.

### **Background**

Although many institutions offer first-year programs to students, the retention rate of first-year students has continued to decrease (National Center for Education Statistics, 2022). The first semester is crucial because most of the attrition occurs between the first and second years (Mayo, 2013). The first-year experience at a higher education institution is also crucial because it plays a significant role in setting them up for future success (Alamuddin & Bender, 2018). While much research has been conducted regarding student retention rate, particularly at community colleges, community colleges often attract students who are less prepared for college than those students who attend 4-year institutions (Pena & Rhodes, 2019). First-year student retention in independent community colleges in New Mexico continues to decrease (National Center for Education Statistics, 2022). There was a need to conduct research to understand why the first-year programs are not helping students in the first year at community colleges be

successful. These various first-year initiatives needed further study to determine what effect these programs have on first-year student retention (Pena & Rhoades, 2019; Watson & Chen, 2019). The current study needed to be conducted because community college students are underrepresented when it comes to college student retention research literature (see Schneider, 2022). The current study could possibly help assist administrators effectively direct resources to meet institutional retention goals (see Alzen et al., 2021).

### **Problem Statement**

The problem that was addressed through the study was that retention rates of first-year students are decreasing within a local, independent community college in northeastern New Mexico. There has been much research conducted regarding student retention rates since the 1930s because it is meaningful to the discipline (Dewberry & Jackson, 2018).. According to Mu and Fosnacht (2019), retention is defined as the institution's ability to keep students enrolled through degree completion. In the current study, I determined retention by analyzing data indicating students' continued enrollment to the next consecutive semester, which was provided by the study site college's records office. Community colleges often attract students who are less prepared for college than those students who attend 4-year institutions (Pena & Rhoades, 2019).

There are three pieces of evidence in support of why this research was conducted. The first piece of evidence is that the first semester is crucial because most attrition occurs between the first and second years (Mayo, 2013). Attrition rates are halved each year after the first year (Mayo, 2013). The second piece of evidence is first-year student

retention in independent community colleges in New Mexico continued to decrease from 2016 to 2020 (National Center for Education Statistics, 2022). According to the IR based on the 2017 cohort (based on the 2019 IPEDS report) the first-year student retention rate was 48%, while the following year's report from the 2018 cohort (based on the 2020 IPEDS report) showed that the first-year student retention rate was 47%. The report from the 2019 cohort (based on the 2021 IPEDS report) indicated a first-year student retention rate of 43% compared to four other institutions at 63% (National Center for Education Statistics, 2022). The third piece of evidence is a gap in practice focusing on the decreasing retention rates of first-year students within local independent community colleges in northeastern New Mexico. At one specific community college, there are student support programs, such as tutoring services, but they are not mandatory. The study site's internal statistics indicate that students who used the tutoring services improved their grades after midterm to the end of the semester. Overall, 100% of those students passed with a C or better, and 18% of these students had an increase from midterms to finals in their grades. With this evidence, a recommendation of changing policy is suggested.

There was a need to conduct research to determine if the decline in retention was associated with use of first-year programs. Retention rates continue to fall, even in the presence of government-funded student support programs (Watson & Chen, 2019). Efforts have been made to address the issue of student retention in these institutions; however, the problem continues to intensify even though colleges devote a sizable portion of student support programs towards the first-year students in hopes of increasing

student retention and graduation rates (Caballero, 2020). In summary, there is a consensus from several sources that have found that there is a problem with student retention (i.e., Dewberry & Jackson, 2018; Mu & Fosnacht, 2019; Pena & Rhodes, 2019), and little is known about the relationship between support programs and first-year retention.

Therefore, I conducted this study to identify if support programs are associated with first-year attrition. The findings will shed light on the issue and give administrators and stakeholders a better idea of the impact of the programs so that mitigation efforts can be focused to best support students. These various first-year initiatives needed further study to determine what effect these programs have on first-year retention (Pena & Rhoades 2019; Watson & Chen, 2019). Furthermore, the current study could help assist administrators effectively direct resources to meet institutional retention goals (see Alzen et al., 2021).

### **Purpose of the Study**

The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. The dependent variable (DV) was first-year retention nominal (i.e., yes or no), and the independent variable (IV) was program or no program. A more detailed description of the variables will be provided in Chapter 3.

### **Research Question and Hypotheses**

RQ: What is the extent of the association between student retention and government-funded tutoring program utilization among first-year students at an independent community college in northeastern New Mexico?

$H_0$ : There is no association between student retention and government-funded tutoring program utilization among first-year students.

$H_a$ : There is an association between student retention and government-funded tutoring program utilization among first-year students.

I used a Chi-Square Test of Association to determine if there is any statistically significant difference between first-year students who do and do not utilize first-year programs.

### **Theoretical Foundation**

The theoretical foundation for the study was Tinto's (1975) theory of student retention, which has been used extensively in studying all aspects of student retention (Burke, 2019). Tinto's classic theory of student retention addresses ways that dropout decisions are influenced by numerous factors, including social/individual characteristics, academic and social system, academic and social integration, goal, and institutional commitment. The theory of student retention informed the research problem in the current study by helping to explain dropout as an interactive process between the individual and the institution I also synthesized recent research on the phenomenon of higher education dropouts using the student retention theory model (Tinto, 1975). The theory also informed the purpose of this study by assisting my examination of the

association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. Finally, I used the theory to inform the methodological decisions in the study by collecting data from the institutional research director and collect data from the IPEDS. To provide insight into the challenge of student retention in higher education in northeastern New Mexico. A more detailed explanation of student retention theory will be provided in Chapter 2.

### **Nature of the Study**

In this quantitative study, I employed a quasi-experimental design. The quasi-experimental design is used to determine the casual impact of an IV and observing the outcome (Shek & Wu, 2018). A quasi-experimental design was appropriate for the current study because the purpose of this study was to determine whether there was an association between student retention and government-funded tutoring program utilization among first-year students. Institutional research data in the form of IPEDS reports of first-year student retention from the National Center for Educational Statistics (NCES) databases were gathered from the institutional research director of the northeastern New Mexico community college study. The data were focused on first-year student retention rates from the 2021 cohort, which was based on the 2023 IPEDS report. A potential barrier when using data provided by a single community college is that institutions may vary in how they report their data. It was important to examine the IPEDS codebook to ensure anomalies were identified and addressed. Data analysis included a Chi-Square Test of Association. I used a Chi-Square Test of Association to

determine the significance of observed differences between the values of categorical variables. The test works by comparing an expected proportion or ratio to an observed proportion or ratio (Thomas, 2017).

### **Definitions**

These definitions of key concepts are included to provide a better understanding of the study.

*Adjunct faculty*: Institutional faculty who are nontenured, part-time with yearly contracts, working on a course basis, without any true job security or benefits (American Association of University Professors, 2018).

*Association*: Relationship between or among variables (Burkholder et al., 2020).

*Attrition*: Number of individuals who leave a program of study before completing it (IGI Global, 2023).

*First-year programs*: Programs that include academic and nonacademic strategies that contribute to increase retention (Mayo, 2013).

*Full-time faculty*: Institutional faculty who are employed full-time, teach a full credit load every semester, and are employed on annual contractual basis (Bickerstaff & Chavarin, 2018).

*Retention*: Continued enrollment (or degree completion) within the same higher education institution 1 year after entry (National Student Clearing House Research Center, 2015).

*Student retention theory*: A theory that addresses ways that dropout decisions are influenced by various factors, including social/individual characteristics, academic and

social system, academic and social integration, goal, and institutional commitment (Tinto, 1975).

*Stakeholder:* A group or individual who can be affected or is by the achievement of the institution's objectives (Freeman, 2010).

### **Assumptions**

According to Levitt et al. (2018), researchers are concerned about how assumptions influence the validity of the research process. I made three assumptions in this study. I assumed that the samples used in the study were a representative of the larger population of associate degree-seeking students from the 2021 cohort. Another assumption, which is characteristic in associative design, was that the two groups being associated were equivalent. The only difference between the two groups being the variable of interest (see Shek & Wu, 2018). I also assumed, because the results of the study depended on the quality of data provided by the study site, that the quasi-experimental design was accurate and complete.

### **Scope and Delimitations**

The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. Therefore, the study was limited to first-year students who attended a community college located in northeastern New Mexico for the 2021 cohort based on the IPEDS 2023 report. The scope of data collection and analysis was limited to what was necessary to complete the examination of the association between student retention and government-funded

tutoring program utilization among first-year students. There is potential generalizability in the study because the results could be useful to administrators, faculty of the study site college, other U.S. community colleges, and other countries around the world.

### **Limitations**

This quantitative study had two limitations related to design. The first design limitation of the study was the location of the study. Data were collected from a single community college located in the northeastern part of New Mexico. I selected this location to narrow the scope of the study using new data collection. The data were collected from the Institutional Records department by the study site's institutional research director. This limitation was addressed by focusing on the study group that had the high attrition rate. Although the sample was a smaller group, focusing on this group with a high attrition rate provided more information to lead to larger samples. The second design limitation was the criteria applied to the sample for the study. This limitation was addressed by focusing on the sample for the study, which was first-year students. This limitation was possible to mitigate because first-year students are used as the basis for institutional improvement efforts and increasing student retention and graduation rates (see Caballero, 2020). Because of design limitations, the results of this study may not be generalizable to institutions that do not share demographics with the study site, which includes type and location of institution. The limitation related to generalization reflected only students at a public, independent community college in northeastern New Mexico.

This quantitative study has one limitation related to methodological weakness. The methodological weakness of the study was that a quasi-experimental design was

used. A quasi-experimental design only allows researchers to conclude the association among comparison of groups on a DV (Burkholder et al., 2020). I selected this design because it could narrow the focus of the study to examining associations. The limitation was addressed by utilization of the most current data, abiding by best practices in data collection and analysis, and providing recommendations for other studies. Future studies can include explorations of the cause or effect of those associations.

### **Significance**

The study addressed a local problem and focused on examining the relationship between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. The study is unique because it was an original contribution addressing a gap in practice and potentially contributing to positive social change. The results of the study provided insight to help fill the gap in practice, in that education leaders can use the results to develop a better understanding of how declining student retention rates are related to the utilization or nonutilization of first-year programs. Studies on how student support services programs contribute to student success are scarce, and additional insight into the influence that government-funded student support services programs have on student retention is needed (Watson & Chen, 2019).

This study has the potential to help education leaders better understand the significance of these first-year programs with respect to their initial goals and gain new insight to better meet the needs of first-year community college students. This could potentially help to enhance institutional efforts to support and develop successful first-

year programs that may support and empower students in ways that help them to remain at the institution to continue towards their educational goals. The results of this study could also potentially contribute to positive social change as a possible solution for increasing student retention in the future.

Students attend a community college for many reasons. Community colleges have provided opportunities for many first-generation, low-income, and minority students, and therefore, a more diverse ethnic population attends a community college (Watson & Chen, 2019). Because a broad range of ethnically diverse students are attending community colleges, supporting their successful attainment of an associate degree allows for increased diversity among individuals earning degrees, which potentially allows for leadership positions and positive social change.

### **Summary**

In Chapter 1, I provided an introduction to the study and explained its context, problem, purpose, and research question and hypotheses. Furthermore, other components, such as the theoretical foundation, nature of study, definitions, assumptions, scope and delimitations, limitations, and significance were also discussed. In Chapter 2, I will present a review of the literature in which the literature strategy, the theoretical foundation, and key concepts and variables of the study are described. Through the literature review, support and validation of the need to conduct the study will be provided.

## Chapter 2: Literature Review

The problem addressed in this quantitative study was the trend of decreasing retention rates of first-year students within an independent community college in northeastern New Mexico. Educators may have influenced the problem because of their lack of understanding how declining student retention rates are related to utilization and nonutilization of first-year programs, which is a gap in practice. The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. Therefore, I organized this literature review to illustrate the connection between first-year programs and first-year students.

Researchers have shown that many student and institutional variables impact student success. Researchers have found that student retention is impacted by student success in first-year programs, which include federal student financial aid and academic support programs and Educational Opportunity Fund (EOF) programs (Watson & Chen, 2019). Researchers have also shown that employment status of faculty (i.e., full-time) influences student retention (Hutto, 2017) and that students with higher support seeking attitudes and students with a mentor reported closer relationship with instructors (Parnes et al., 2020). The relationship between coaching factors has a positive effect on credit hour completion (Pechac & Slantcheva, 2021). However, there was a lack in research regarding the connection between student retention and first-year government-funded tutoring programs in a northeastern New Mexico community college.

In Chapter 2, I present the literature search strategy, theoretical foundation comprised of the student retention theory and Beans and Metzner's model, literature review related to key concepts and variables (i.e., retention as well as full-time and adjunct faculty). . A description is also given for the type of theories the literature was based on.

### **Literature Search Strategy**

I conducted the literature search using educational databases that included *Review of Educational Research*; *HETS Online Journal*; *Community College Journal of Research and Practice*; *Journal of Higher Education Theory and Practice*; National Center for Education Statistics; *Research in Higher Education Journal*; The University of Chicago Press; *Journal of College Student Retention Research*; *Theory & Practice*; and other resources, such as the Google Scholar search engine, tracking databases, such as Microsoft Word or Excel, and the Walden University Library. I also gathered research from government websites and the study site's website. The scope of the literature review related to the key concepts and variables of the study, including literature published between 1975 and 2022. Most of the selected articles were published in the last 5 years, and some were from older publications because they focused on the theoretical foundation. I included literature from 1975 and 1985 to provide seminal research models. Keyword search terms included combinations of *student retention*, *first-year programs*, *community colleges*, *persistence*, and *two-year colleges*. I selected literature that addressed first-year programs of study in the form of peer-reviewed articles and journals.

## **Theoretical Foundation**

The theoretical foundation for the study was the dropout prevention framework. The dropout prevention framework has been used in multiple education-related research studies since its inception in the middle 1970s (Beans & Metzner, 1985; Tinto, 1975). There are two theories that were utilized in the research and also comprised the dropout prevention framework. The most common one is the student retention theory developed by Tinto (1975) and the next theory used was authored by Beans and Metzner (1985). I discuss both of these in the following subsections.

I conducted this research study intending to use the lens of the dropout prevention theory to focus on the use of first-year programs. I sought to describe first-year students' use of first-year programs and analyze perceptual trends to identify differences that may exist between students who did and did not use first-year programs.

### **Student Retention Theory**

The theoretical foundation for the study was based on Tinto's (1975) student retention theory. The student retention theory addresses ways dropout decisions are influenced by numerous factors, including social/individual characteristics, academic and social system, academic and social integration, goal, and institutional commitment. Tinto's theoretical work has been used extensively in the aspects of higher education research because the approach provides details on student retention that emerge from a result of voluntary withdrawal and academic dismissal. Furthermore, subsequent research and application of Tinto's theory offer guidance on ways to facilitate first-year programs, thus allowing for insight into the challenge of student retention in higher education.

Tinto (2010) examined four institutional conditions: feedback, involvement, support, and student expectations. I used these four conditions to determine the association between student retention and a student's decision-making process of withdrawal persistence through making a commitment to the institution of higher learning. Tinto emphasized that there is a need for students to connect with members at the institution, which are advisors, faculty, and staff, and this became the focus point of student retention.

I chose the student retention theory for this study because it allowed for insight into the challenge of student retention in higher education in northeastern New Mexico. There has been a decrease in student retention at the study site, and it is essential to understand why it is happening, specifically whether this is due to government-funded tutoring program utilization or no government-funded tutoring program utilization. The results from the study could potentially assist with facilitating first-year programs at the college in the future. The results of this study could also be used to build upon the student retention theory in future studies. Furthermore, the results of the study could help assist administrators effectively direct resources to meet institutional retention goals (see Alzen et al., 2021).

### **Beans and Metzner Model**

Beans and Metzner (1985) developed a nontraditional undergraduate student attrition model to address community colleges. The model was created to address the environmental variables that colleges must consider to enhance persistence and holds that environmental factors exert more influence than academic variables and can compensate

for adverse effects of the academic variables. For example, a student with inadequate financial and emotional support may persist with poor advisement or uncertainty of major. This leads to positive academic variables being incapable of overcoming the adverse effects of the environmental variables, which are jobs coming first and family responsibilities. In the student retention theory, Tinto (1975) explained dropouts as an interactive process between the individual and the institution. Samuel and Scott (2014) identified institutional practices that might encourage student retention, finding mandatory orientation and work-study opportunities as the essential campus services. Hafer et al. (2021) focused on the basic psychological needs competence with elements of Bean and Metzner's nontraditional student attrition model, finding competence with grade point average exhibited the sole effect on student retention.

I chose Beans and Metzner's (1985) model for the current study because it focuses on a nontraditional undergraduate student attrition model for community colleges, and this study was centered on student retention within a community college in northeastern New Mexico. The results from the study answered the research question and could possibly help with facilitating first-year programs at the college in the future. The results of this study could also possibly build upon the student retention theory in future studies.

### **Literature Review Related to Key Concepts and Variables**

The literature review related to key concepts and variables is discussed in this section. The key concepts and variables are retention, faculty (both full-time and adjuncts), academic advising, and faculty advising.

**Retention**

Although many community colleges offer first-year, government-funded programs to students, the retention rate of first-year students has continued to decrease (National Center for Education Statistics, 2022). Some research has demonstrated that effective first-year programs should focus on improving first-year student retention, such as a variety of interventions that enhance learning and retention (Windham et al., 2014). To determine what characteristics, increase community college student retention with a heightened interest on the predictive nature of taking a student success course. Also, find out what government-funded academic support programs, and developing innovative initiatives to improve student retention rates (Watson & Chen, 2019; Tinto, 2012). Coordination and communication among campus administrators, staff, and faculty to facilitate a successful implementation of first-year program requirement for first-year students (Mayo, 2013). Students who come from low-income families have a limited view of how they can continue their education, and finances are a primary cause of attrition among first-time first-year students (Pena & Rhoades, 2019). Additionally, academic readiness for first-year students is another cause of attrition (Barbera et al., 2020). Therefore, the key to increasing students' success is to understand the importance of their needs and backgrounds (Varty, 2022).

A structured and required first-year program will provide a common set of goals, thereby contributing to increased retention and successful graduation rates (Mayo, 2013). College survival courses, such as study skills or improvement of studies courses, are offered to assist students with college preparation and retention (Windham et al., 2014),

peer mentoring programs are available to enhance first-year college student retention (Holt & Fifer, 2018; Lane, 2020), and Interdisciplinary Studies programs are offered to implement interdisciplinary coursework to help with student retention and provide them skills for today's workforce (Joyce & White, 2020). In other words, researchers have evaluated and compared different retention models for many years. It is essential to recognize the importance of retention efforts during the first year of higher education (Roddy, 2016). The problem is not always the types of first-year programs being offered to first-year students. Sometimes the use of first-year programs was inefficiently strategized by advisors, teachers and/or administrators.

The dropout framework has been used in multiple education-related research studies since its inception in the middle 1970s. For example, Tinto (1975) developed the student retention theory to explain dropout as an interactive process between the individual and the institution. A student's first year of college is most difficult when it comes to academic and social transition (Cole et al, 2020). Al-Sheeb et al. (2018) stated a first-year student's life at an institution is full of interrelated academic and social experiences and can be challenging. Academic and social integration play a critical role in student's choices to remain in college and are a key ingredient to student performance and retention (Bilodeau & Messier, 2018; Davis et al., 2019). Yukhymenko-Lescroart and Sharma (2020) mentioned the first year of college serves as a crucial time period for students to lay a positive foundation for ongoing college results. Mayo (2013) highlighted the importance of guidelines for establishing first-year programs and identifies the components that should be included in first-year programs, including both academic and

nonacademic strategies. Academic strategies consisted of preparatory workshops, supplemental instruction, and peer tutoring, while nonacademic strategies emphasized social activities and student engagement. Samuel and Scott (2014) identified institutional practices that might encourage student retention, finding that mandatory orientation and work-study opportunities as the essential campus services. Hatch et al. (2018) uncovered how first-year student success programs work, finding that the programs created a welcoming peer environment. Hanley-Dafoe and Bruce (2018) explored the challenges first-year students face during their first year at postsecondary institutions, finding the value and responsibility of supporting students by connecting with peers, departments, and the institution overall. Watson and Chen (2019) identified that the EOF program might encourage first-year student retention at community colleges in New York. Nieuwoudt and Kelly (2021) determined what multiple factors influenced student retention, finding that social support was the major factor for retention. Zegre et al. (2022) examined the relationship between campus recreation programs and first-year retention, determining that there is a positive relationship between academic success, retention, and graduation. In a multiple-case study, Stone et al., (2020) discovered the values of college students from rural communities and reported how those values impacted their choices concerning higher education.

There is a relationship between peer mentorship and student retention. Wilton et al. (2021) examined the relationship between peer mentorship programs and first-year retention, finding that peer mentorship programs improve academic performance and student retention. Gabriel (2018) observed the retention and persistence effects of an

outdoor orientation program to determine if the effectiveness of these programs and their structure was consistent in such an environment and added to the body of literature supporting the effectiveness of such programs. Their findings showed students who participated in the orientation program had a higher percentage rate of retainment compared to students who did not participate in the program. Kulp et al. (2021) examined the relationships between first-year college students who attended campus-sponsored extracurricular event programs and retention, finding first-year students who attended the events improve student retention. McElveen and Ibele (2019) explored the relationships between first-year college students who participated in intramural sports, Division III athletic programs, and retention, showing that first-year students who participated in intramural sports and Division III athletic programs had a positive relationship with retention. Vasold et al. (2019) determined the relationship between university club and intramural sports participation and retention, finding that students who participated in sports were more likely to report higher grade averages and retention. Baugus (2020) determined that the relationship between the use of nonacademic programs, such food pantry, transportation, and childcare at no cost to enrolled students, resulted in good chances of low-income students of being retained. Skoglund et al. (2018) defined that supplemental instruction programs, which is an academic support program, helped develop academic skills and increased student retention. Arhin and Wang'eri (2018) investigated how orientation programs predict student retention, discovering that the orientation program is a significant predictor of student retention. O'Hara (2022)

emphasized that there needs to be a supportive system that is both in and out of college for student retention.

### **Faculty (Full-Time and Adjuncts)**

The student retention theory depends on the relationship between students and faculty employment status (full-time and adjunct faculty members). Hutto (2017) analyzed this relationship. The results of the study found that adjunct faculty members have slightly higher levels of course retention than permanent faculty members (Hutto, 2017). The student retention theory indicates there is merit in inquiring of affected students if current contributors influence personal decisions to engage in learning actively or persist in community colleges.

Tinto (2012) found that faculty members play a critical role in retaining students, and significantly identified students' interactions with faculty during the first two years of college as a significant factor in student retention. Roddy (2016) identified strategies college administrators can employ to improve the retention of students. Faculty can utilize these retention strategies. Roddy noted that immediate tutoring assistance and in-depth orientations were provided to prepare students for college life, counselors and coaches reached out to students when alerted that the student may need assistance.

Caballero (2020) identified strategies college faculty can employ to improve student retention. Muljanna and Luo (2019) recommended a strategy for improving student retention, such as maintaining continuous engagement with students, active interaction between instructors and students, and institutional support to faculty.

Caballero noted that professors are the key for student retention at an institution because they are advisors and guides and most important, they are role models. Faculty are the most empowered personnel to support student perseverance, especially when they recognize the problem a student is having and care about solving the issue (Miller et al, 2019). Vargas et al. (2020) remarked that faculty performs important positions in the academic lives of students. Luciano-Wong and Crowe (2019) mentioned that faculty can influence student success through the development of programs and student interactions. Effective student and faculty interactions can have a positive influence on student retention, for it increases engagement, learning, and student motivation (Kahu & Picton, 2019).

Tinto (2012) recognized the importance of retention efforts during the first year of higher education and proposed that academic integration was associated with increased persistence in reaching graduation. These methods, along with a deeper understanding of how institutional programs affect first-year students, may help students strengthen their confidence to continue their education. Not only does this have the potential to increase student retention at community colleges, but it has the potential to improve degree completion resulting from continual course retention (Hutto, 2017).

### **Academic Advising**

The student retention theory depends on the relationship of the students and their academic advisors. Academic advising is a crucial role towards academic success (El-Sheikh et al., 2019). Academic advising are interactions between students and advisors who represent institutions of higher education such as community colleges and

universities (Chan et al., 2019), and critical for the learning process and final success of students (Gutierrez et al., 2020). Advising is important in student retention because it is related to a student's success and retention (Snyder, 2018; Zhang et al., 2019). Advising needs to be efficient and productive in helping students complete their selected programs in a beneficial manner (Loucif et al., 2020). Effective academic advising is crucial to improving student retention rates and graduation rates (Carlson, 2020; Uddin, 2020). Intrusive advising proves to be one of the more effective advising approaches for academic advisors with student retention, for advisors can intervene at crucial points in a student's trajectory (Alvarado & Olson, 2020). Academic advisors can do this by mentoring and helping students make positive choices academically and socially (Harrell & Reglin, 2018).

Academic advisors have an essential role to help students solve their academic problems, and regularly contribute to their academic success and occupational success (McGill, 2019). Academic advisors perform progressively more important positions in attracting and retaining students at their respective institutions and can provide vital support to college students (Elliot, 2020; Museus, 2021). One technique academic advisor's use to attract students is initiative-taking advising. Academic advisors who utilize initiative-taking advising, which is contact initiated by the higher education institution. The purpose is to encourage positive relationships between advisors and students, and to assist students' persistence and success (Van Jura & Prieto, 2021).

Advising support to students is provided in an intensive manner to assist them with both life and career goals and to create a clear academic plan for successful retention

and graduation (Donaldson et al., 2020; Harris, 2018; Tudor, 2018). There are two important outcomes for advising. They are process and delivery, and they relate to student expectations. There are also five types of core qualities for academic advising that are important to students. They include approachability, availability, helpfulness, knowledge, and mentorship (Springer & Tyran, 2022).

### **Faculty Advising**

The student retention theory also depends on the relationship between students and their faculty advisors. Advising creates the opportunity for a personal and consistent relationship between faculty and students (Keenahan et al., 2022). Faculty advisors play a major part in student development and success (Lahiri et al., 2021). These institutional counselors have expert knowledge and experience in the academic major pursued by the student. Additionally, the above-mentioned are also knowledgeable about the career paths, internship opportunities, and are vital to helping students in reaching their desired career goals (Baird, 2020; Thomas & McFarlane, 2018).

The faculty consultants of the institutions can also provide social support for students, which is a buffer for stress. Stress in students can be produced due to exposure of the demands of the institution (Amirkhan & Kofman, 2018). According to Roos and Schreck (2021), current students are more stressed than students who previously attended colleges and universities in the past. Finally, faculty can provide effective advising, which is crucial to improving student retention rates and graduation rates because faculty advisors help students understand and make connections between academics and future

goals (Hart-Baldrige, 2020). The interactions students have with faculty significantly influence their decision to progress with their education (Powers & Wartalski, 2021).

### **Summary and Conclusions**

Student success and institutional success are dependent on student retention (Burke, 2019). Efforts to improve retention must include strategies to improve student success in first-year programs (Caballero, 2020). Adjunct faculty and full-time faculty influence student retention (Hutto, 2017).

The study addressed the problem of a decreasing trend in associate degree seeking student retention rates a community college located in northeastern New Mexico. What is known in the discipline is that student retention is influenced by either academics or social characteristics (Tinto, 1975). What is not known in the discipline is that student retention is associated with government-funded tutoring program utilization or a government-funded tutoring program utilization among first-year students. The problem may have been influenced by a gap in practice, in that education leaders will have a better understanding of how declining student retention rates are related to the utilization or non-utilization of first-year programs. The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. Therefore, the literature review was organized to illustrate the connection between first-year programs and first-year students.

In Chapter 2, literature search strategy, theoretical foundation (student retention model, Beans and Metzner model) were presented. Also, the literature review related to

key concepts and variables, retention and faculty (full-time and adjuncts), were presented.

By viewing the problem, research provided additional insight into student retention.

The design and elements of the study will be addressed in Chapter 3. I will discuss the research design and rationale, methodology (i.e., setting, population selection, archival data, variables, and data analysis plan), issues of validity, and ethical procedures that pertain to the study. The chapter will conclude with a summary.

### Chapter 3: Research Method

Retention is a key component in two areas: student and institutional success (Burke, 2019). Thus, the purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. In this chapter, I discuss the research setting, design, methodology, threats to validity, and ethical procedures.

#### **Research Design and Rationale**

I used a quantitative method with a quasi-experimental design in the current study. The method and design were appropriate for the study because the intent of the study was to investigate whether student retention is associated with program utilization (i.e., program or no program; the IV). I addressed the research question using a Chi-Square Test of Association, which is used to analyze two categorical variables. In the case of this study, the two categorical variables were the government-funded tutorial programs (IV) and student retention status (DV). The test was used to determine if there is a relationship between students who did and did not utilize first-year, government-funded tutoring programs and student retention. I did not employ a qualitative method of inquiry because the perceptions of the first-year students were not needed to answer the research question because the study was conducted to determine a statistically significant association among variables.

## **Methodology**

In this section, I describe the setting, population selection, use of archival data, variables, and data analysis plan. The number of student participants and the location where the research was conducted are detailed and the the procedures for conducting the study are explained.

### **Setting**

The study site community college is a small, open enrollment, public, community college with an enrollment of approximately 800 students, of which 120 were first-year, full-time students at the beginning of the fall 2021 semester. The community college serves the rural communities of northeastern New Mexico. The study site was established as a vocational training facility in 1969 and is now a 2-year institution of higher learning. The study site is accredited by the Higher Learning Commission to award associate degrees and certificates.

### **Population Selection**

The sample for the study was 80 randomly selected, first-year, degree-seeking students from the 2021 cohort at the study site. These students were full-time status students that were attending the main campus. I changed the students' names to an identifying number to ensure their confidentiality.

### **Sampling and Sampling Procedures**

Field (2018) provided a method designed for determining sample size when a study consists of one continuous dependent/outcome variable. Field's method only requires two things: (a) how many independent variables are in the study, and (2) the

expected strength of effect size that the researcher wants to be able to detect. There are three different effect sizes: small, medium, and large. Sullivan and Feinn (2012) stated that,

Like statistical significance, statistical power depends upon effect size and sample size. If the effect size of the intervention is large, it is possible to detect such an effect in smaller sample numbers, whereas a smaller effect size would require larger sample sizes. (p. 282)

The larger the sample size will result in a smaller effect size.

The inclusion criteria for the study were only first-year, full-time students. I selected the participants by using the systematic, random sampling technique. The exclusion criteria for the study were first-year, part-time students; returning students; traditional students; faculty; and staff. A priori analysis using G Power 3.1.9.4 indicated a minimum sample size of 88 participants was required to achieve a .05 level of significance (see Li-Ting & Leping, 2019). The university research reviewer approved the use of 67% of the cohort for the study, which was 80 students from the total 120 first-year, full-time students.

### **Archival Data**

I used archival data for this study with no researcher-participant interaction. Permission to gain access to the data was granted by using the Data Use Agreement form provided by Walden University's Institutional Review Board (IRB). Upon receiving approval to conduct the from Walden University's IRB (IRB Approval No. 08-03-23-0759195) and the study site, the data required to complete the study were gathered from

the study site. The data were collected from the Institutional Records department by the study site's institutional research director. I applied the inclusion and exclusion criteria to the provided data to identify participants. Students were de-identified by the study site prior to my receipt of the data. Data obtained for this study consisted of first-year students' participation and nonparticipation in first-year programs. Data were limited to first-year, degree-seeking students in the 2021 cohort. The data for the study was collected from attendance reports from first-year programs from the Academic Center for Excellence (ACE) office. Additional data were collected from semester course grades for the student population. After the data were collected, I separated it into four categories: (a) students who took tutoring and were retained, (b) students who took tutoring and dropped out, (c) students who did not take tutoring and were retained, and (d) students who did not take tutoring and dropped out. I ensured that the numbers of the tutoring versus nontutoring groups were equal for this study.

## **Variables**

### ***Program and No Program: IV***

Students who used programs were coded as 1, and students who did not use the programs were coded as 0 for data entry purposes.

### ***First-year retention nominal (Yes or No): DV***

Students who were retained were coded as Y and students who were not retained were coded as N for data entry purposes.

### **Data Analysis Plan**

I used the Statistical Package for the Social Sciences (SPSS) Version 28 for data analysis in the study. The following research question guided the study:

RQ: What is the extent of the association between student retention and government-funded tutoring program utilization among first-year students at an independent community college in northeastern New Mexico?

$H_0$ : There is no association between student retention and government-funded tutoring program utilization among first-year students.

$H_a$ : There is an association between student retention and government-funded tutoring program utilization among first-year students.

I performed a Chi-Square Test of Association on the archival data using the general linear model (GLM) in SPSS to determine if there was any statistically significant difference between first-year students from 2021 who did and did not utilize first-year programs within the study site to help determine the effectiveness of student retention. Institutional research data were gathered from the study site's institutional research director. The data reports were from the fall 2021 and fall 2022 enrollment reports. I matched the student identification numbers of first-year students from the enrollment reports with sign-in sheets and reports from fall 2021 to spring 2022 provided by the ACE. A potential barrier when using data provided by the community college was that the institution may vary in how they report their data.

### **Threats to Validity**

In the context of a quantitative research study, validity refers to the legitimacy of the research proposed (Burkholder et al., 2020). According to Fendler (2016), the failure to meet quality standards may result in research findings that are inaccurate or misleading. It is essential to conduct valid studies to guide decision making (Burkholder et al., 2016). When both the research design and research methods are dependable and the results accurately describe the event under study, a study is considered valid (Burkholder et al., 2016).

There are two types of validity: internal and external. According to Thomas (2017), the degree of soundness of the study, including the described effect of the IV and DV refers to internal validity. The current study was comparative in design to help determine the effectiveness of student retention. Internal validity is enhanced when extraneous variables are controlled for (Burkholder et al., 2016). To alleviate threats to internal validity, I controlled for student enrollment status in the study by gathering records from the registrar's office listing only the full-time, first-year students and comparing that data gathered from the institutional research director ensuring the names and student identification numbers matched on the data reports.

Furthermore, I asked the registrar and institutional research director how they ensured the validity and reliability of data collection. To ensure and validate, the Office of the Registrar Director appointed an in-office employee within the information and technology services department to help directly with the data collection for the current study. The employee helped to remove any Family Educational Rights and Privacy Act-

protected information, such as social security numbers and the date of birth of students. The Family Educational Rights and Privacy Act is a federal law that protects the privacy of student education records (U. S. Department of Education, 1974). The only information the in-office employee provided for the study was student identification numbers. The information and technology department were responsible for ensuring a cohesive data architecture and data standards as well as for facilitating appropriate access to information across the college. Data elements, such as students' first names, last names, and student identification numbers were not used to maintain confidentiality. Data integrity protocol followed the qualities of validity and reliability conjoined with the accuracy of values, and were within the mission and vision statement of the college. The Office of the Registrar has rules for in-office employees to follow for the full confidentiality and protection of students.

To ensure validity and reliability, the institutional research director had the lead database administrator (LDA) perform several procedures. The data were extracted through the Open Database Connectivity (ODBC) using Microsoft Excel. ODBC is a standardized programming interface that enables software applications to interact with a variety of databases in a consistent manner (Microsoft, 2024). It is a way for different software applications to communicate with each other and access the same database, regardless of the specific database technology or programming language used. ODBC acts as a bridge between the application and the database, allowing the application to send and receive data from the database through a set of standardized commands and protocols.

The LDA reviewed each student's data individually and made sure the information was correct. The data only included the student's identification number. However, names were added to other reports, such as the first-year students from the fall 2021 and second-year students from the fall 2022. These are the reports that were required from the institutional research director to conduct the study. The validity and reliability measures taken by the institutional research director were used in the study. The measures ensured the validity and reliability of the data collected; the data collected in this study were a subsection of the larger data collected by the LDA. Student identification numbers of students for the fall 2021 cohort that did not match those on the list of 40 students provided by the ACE office were collected from the registrar's office. This gave me two groups of student identification numbers to take to the institutional research to find out if they were retained or not.

According to Burkholder et al. (2016), external validity refers to the extent research findings are generalizable, or the degree to which findings apply in other contexts. To mitigate threats to external validity, I conducted a complete review of current literature so the study builds on related studies and the context of the study was described (see Burkholder et al., 2016). The description of the context provided included the population, setting, data, and measurements that were utilized for the study. To increase representativeness for the study, approximately 67% of the representation of the student population under study was utilized. To increase the ability of the study to be duplicated across contexts, I reported the findings of the study in a transparent,

comprehensive, and clear manner (see Hanasono, 2017). To mitigate threats, a statement or disclosure is provided in the following section.

### **Ethical Procedures**

Formal application and approval from Walden University IRBs were required because IRBs govern ethical considerations for data collection. The data collected for the study will be stored in a secure location in my residence for 5 years in my computer that is password locked. After 5 years, the information will be destroyed by being deleted completely from my computer. Data for the study will not include any identifying student information because the names were replaced with numbers by the study site. I will maintain and honor the study site's anonymity by not publicly revealing the name of the study site or where it is located.

### **Summary**

I conducted this study to address the problem of decreasing retention rates among first-year students within an independent community college in northeastern New Mexico. The purpose of this quantitative study was to examine the association between student retention and program utilization among first-year students. Quantitative analysis of data pertaining to first-year students who did and did not utilize first-year programs to help determine their effectiveness on student retention was performed using a Chi-Square Test of Association.

In this chapter, the research design and rationale as well as methodology (i.e., setting, population selection, archival data, variables, and data analysis plan) were described. I also discussed the threats to both internal and external validity and ethical

procedures. In Chapter 4, descriptions of the data collection process, data analysis, and results of the data analysis will be presented. A summary in which the research question will be answered based on data analysis results will also be provided in Chapter 4.

## Chapter 4: Results

The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. The following research question and hypotheses guided the study:

RQ: What is the extent of the association between student retention and government-funded tutoring program utilization among first-year students at an independent community college in northeastern New Mexico?

$H_0$ : There is no association between student retention and government-funded tutoring program utilization among first-year students.

$H_a$ : There is an association between student retention and government-funded tutoring program utilization among first-year students.

In this chapter, I present the data collection, assumptions testing, and data analysis processes as well as report the results.

### **Data Collection**

I obtained IRB approval Walden University as the IRB of Record before collecting data for this study. Data were provided by the study site institutional research director for the 2021 cohort of first-year, full-time enrolled students. Students were de-identified by the study site prior to my receipt of the data. Data obtained for this study consisted of first-year students' participation and nonparticipation in the government-funded tutoring program. The data for the study were collected from attendance reports

from first-year programs from the ACE office. Additional data were collected from semester course grades for the student population.

The process for the data collection took a few weeks to gather from both the study site institutional research director and the ACE. The data were provided by the LDA 1 week after my request was sent to the study site institutional research director. That data provided by the ACE was provided 2 weeks after the data were requested. After the data were received from both the LDA and the ACE, I reviewed it to ensure it followed the data collection plan as presented in Chapter 3. After the data were reviewed, it was determined that there were no discrepancies in the data. All data provided were in accordance with the plan presented. During the data collection process, everything went according to the plan presented and nothing unexpected occurred.

After the data were collected, I separated it into four categories: (a) students who took tutoring and were retained, (b) students who took tutoring and dropped out, (c) students who did not take tutoring and were retained, and (d) students who did not take tutoring and dropped out. I ensured that the numbers of the tutoring versus nontutoring groups were equal for this study.

The sample consisted of 80 of the total 120 first-year, full-time enrolled students from the 2021 cohort. The sample of the 80 students used for the study was divided between 40 students that did utilize the tutoring program and 40 students that did not utilize the tutoring program. The determination to choose a large sample size yields smaller margins of error and is more representative of the student population under study. The sample used in this study had approximately 67% representation of the student

population under study. The reason I used 67% as a good representation of the student population in this study was because this percentage increased representativeness for the study. The Walden university research reviewer approved the sample size used in this study.

## **Data Analysis**

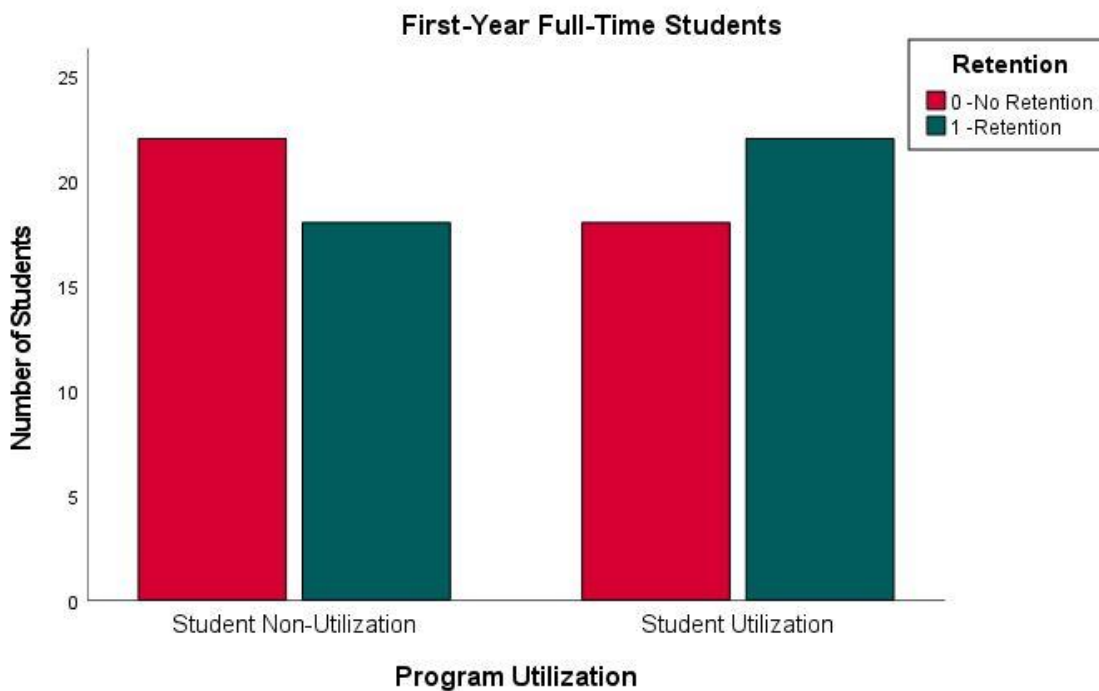
### **Descriptive Data**

I used a Chi-Square Test of Association on the archival data using the GLM in SPSS to determine if there was any statistically significant difference between first-year students who did and did not utilize first-year programs within an independent community college in northeastern New Mexico to help determine the effectiveness of student retention. The outcomes of the test conducted are provided in the Results section of this chapter.

To establish the academic equivalence of the IV groups, I performed a linear regression using the government-funded tutorial programs as IV and student retention status as DV (shown in Figure 1 and Table 1). The Chi-Square Test of Association was performed using the GLM in SPSS. The data showed more nonutilization of government tutoring programs as well as less student retention of first-year, full-time students. As shown in Table 2, there were no statistically significant differences at  $\alpha = 0.05$  between government-funded tutoring programs and student retention of first-year, full-time students.

**Figure 1**

*Bar Graph of Student Retention and Nonretention by Program Utilization*

**Table 1**

*Student Retention and Nonretention by Program Utilization*

Source	Percent of study group category (program utilization)	Number of students	Percent of student population
Students who took tutoring and were retained.	25	22	27
Students who took tutoring and dropped out.	25	18	23
Students who did not take tutoring and were retained.	25	17	21
Students who did not take tutoring and dropped out.	25	23	29
Total	100	80	100

**Table 2**

*Chi-Square Test of Association Results for First-Year, Full-Time According to Utilization and Nonutilization of Government-Funded Tutoring Programs*

Source	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-Sided)	Exact Sig. (1-Sided)
Pearson Chi-Square	.800 <sup>a</sup>	1	.371		
Continuity correction <sup>b</sup>	.450	1	.502		
Likelihood ratio	.801	1	.371		
Fisher's exact test				.503	.251
<i>N</i> of valid cases	80				

<sup>a</sup>. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.00.

<sup>b</sup>. Computed only for a 2x2 table.

### **Assumptions Testing**

For this study, I used a Chi-Square Test of Association to determine if retention was significantly different between first-year, full-time students who did and did not utilize the government-funded tutoring programs. One assumption was required for the results of a Chi-Square Test of Association to be valid, which was that there are two categorical variables (see Burkholder et al., 2020). The two categorical variables used in this study were the government-funded tutorial programs as IV and student retention status as DV. The study was conducted under the assumption that all data obtained were accurate and free from errors. The Chi-Square Test of Association is utilized to indicate the likelihood that an allocation of frequencies would have been discovered by chance or there is a real difference (Thomas, 2017). For this study, determining a real difference was the assumption. I performed a Chi-Square Test of Association to determine if there was a real difference between first-year, full-time students being retained depending on whether they used or did not use government-funded tutorial programs.

Some statistical assumptions were not met, which may have weakened the Chi-Square Test of Association. A small sample size could have contributed to the weakness of the test. The assumption of samples used in the study were a representative of the larger population of associate degree-seeking students from the 2021 cohort was not met. A possible reason for not having met the assumption of samples used in the study was not utilizing the entire population of associate degree-seeking students from the 2021 cohort. The assumption of characteristics in associative design is that two groups being associated were equivalent was also not met. A possible reason for not having met the assumption of characteristics in associative design was that the two groups being associated were equivalent with a larger sample size. The two groups should have been broken into two even groups of 60 instead of 40 students.

### **Results**

My primary goal of conducting the Chi-Square Test of Association was to determine whether there was an association between government-funded tutorial programs as IV and student retention status as DV for the 2021 cohort of first-year, full-time students. As shown in Figure 1, there was not a statistically significant association between government-funded tutoring programs and student retention. Figure 1 is a bar graph and consists of four bars. The bars are identified with two distinct colors: One color is green, which represented retention, and the other color is red, which represented no retention. The categories were: (a) students who took tutoring and were retained, (b) students who took tutoring and dropped out, (c) students who did not take tutoring and were retained, and (d) students who did not take tutoring and dropped out.

The number of students indicates the number of first-year, full-time students, and there were a total of 80 students used in the study. Program utilization represents the government-funded tutoring program offered at the college. The bar on the far-right side of the graph represented students who took tutoring and were retained. The number of students in this category was 22 and represented 27% of the study group. The bar on the right side of the graph represented the students who took tutoring and dropped out. The number of students in this category was 18 and represented 23% of the study group. The bar on the left side of the graph represented the students who did not take tutoring and were retained. The number of students in this category was 17 and represented 21% of the study group. The bar on the far-left side represented the number of students who did not take tutoring and dropped out. The number of students in this category was 23 and represented 29% of the study group. This category had the greatest amount of first-year, full-time students. The percentage of the study group category was 100% and was broken into four categories of 25%, which represented the four categories used in the study. There were 20 students in each category. I determined the percentage of student population for each category by dividing the number of students of each category by the total number of students in the study. For example, there were 22 students who took tutoring and were retained, so the percentage was determined by dividing 22 students by 80 students, resulting in 27%. The information is provided in Table 1.

As shown in Table 2, a Chi-Square test of Association (with a Yates continuity correction) indicated no significant association between the utilization of the government-funded tutorial programs and student retention,  $X^2(1, n = 80) = .45, p = .50, \phi = .10$ .

The Yates Continuity of Correction with a 2x2 table compensates for the overestimation of the Chi-Square value with a 2x2 table (Walden University, 2022).

As shown in Table 3, a Chi-Square Test of Association (with Cramer's V values) indicated a weak significant association between utilization of the government-funded tutorial programs and student retention,  $X^2(1, n = 80) = .100$ ,  $\phi = .100$ . Cramer's V is a statistical measure that is used to determine the strength of the association between two categorical variables, which in the case of this study are the utilization and nonutilization of government-funded tutoring programs.

**Table 3**

*Chi-Square Test of Association Symmetric Measures for First-Year, Full-Time Students According to Utilization and Nonutilization of Government-Funded Tutoring Programs*

Source		Value	Approximate significance
Nominal by nominal	Phi	.100	.371
	Cramer's V	.100	.371
N of valid cases		80	

### Summary

To address the RQ, I investigated the following null hypothesis: There is no association between student retention and government-funded tutoring program utilization among first-year students. The results of the Chi-Square Test of Association were not statistically significant based on an alpha level of 0.05; therefore, I failed to reject the null hypothesis ( $p = 0.50$ ).

In this chapter, I discussed the data collection, assumptions testing, data analysis, and results of the study. These results extend knowledge and the current literature

regarding student retention. In Chapter 5, the deliverable, credible results regarding the association between utilization of the government-funded tutoring programs and student retention will be discussed while providing a basis for recommendations for future research and the implications for positive social change. I will also provide an interpretation of the results and the limitations of the study in Chapter 5.

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative study was to examine the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. The quasi-experimental design of the study allowed me to conclude that the utilization of government-funded tutoring programs (i.e., the IV) were not associated with student retention (the DV). De-identified student data for the 2021 first-time, full-time cohort were provided by the study site institutional research director. I conducted a Chi-Square Test of Association to determine if there is a statistically significant difference between government-funded tutoring programs and student retention. In this chapter, I provide an interpretation of the findings, consider the limitations of the study, make recommendations for further research, and discuss the study's implications for positive social change and future practice.

### **Interpretation of the Findings**

In this study, I sought to address the influence that government-funded tutoring programs had on first-year full-time student retention and determine if there is a statistically significant difference between government-funded tutoring programs and student retention. An analysis of first-year, full-time student data from the study site demonstrated that first-year, full-time students did not differ among students who utilized government-funded tutoring programs. The percentage of students who utilized government-funded tutoring programs were lower than students who did not utilize government-funded tutoring programs. The percentage of students who utilized

government-funded tutoring programs were 49% and the percentage of students who did not utilize the programs were 51%. The findings confirmed the negative effect that government-funded programs can have on first-time, full-time students. Therefore, the results did not coincide with the information that was described in the literature review in Chapter 2, in which previous researchers have shown that student retention was impacted by student success in first-year programs, which include federal student financial aid, academic support and EOF programs (Watson & Chen, 2019). Wilton et al. (2021) examined the relationship between peer mentorship programs and first-year retention, finding that peer mentorship programs improve academic performance and student retention. However, the results of the current study contradicted the literature. Different possibilities, such as testing a larger sample size for the 2021 cohort or even testing a different cohort, could have resulted in concurrent findings with the literature. When conducting quantitative research, statistical hypothesis is used to draw conclusions about the population being studied. A null hypothesis is the concise statement of the population under study and expresses the concept of no difference; if the results indicate that the null hypothesis is false, then the alternate hypothesis ( $H_A$ ) is presumed to be true (Zar, 2010). In this case, I failed to reject the null hypothesis, which contradicted the literature.

After obtaining a sample of 80 of the total 120 first-year, full-time students provided by the LDA at the study site. I conducted a Chi-Square Test of Association using the SPSS program and determined that there was no association between student retention and government-funded tutoring programs. The results indicated that 27% of students who took tutoring were retained, 23% of students who took tutoring dropped

out, 21% of students who did not take tutoring were retained, and 29% of students who did not take tutoring dropped out.

This relates to the theoretical framework of Tinto's (1975) theory of student retention, which has been used extensively to study all aspects of student retention addresses ways that dropout decisions are influenced by numerous factors. The theory of student retention informed the research problem of the current study by helping to explain dropout as an interactive process between the individual and the institution. The theory informed the purpose of this study by allowing me to examine the association between student retention and government-funded tutoring program utilization among first-year, full-time students within an independent community college in northeastern New Mexico. I sought to describe first-year students' use of first-year programs and analyze perceptual trends to identify differences that may exist between students who did and did not use first-year programs.

There could have been many factors that influenced first-year, full time students at the study site to drop out after the first year. According to Tinto's (1975) dropout prevention framework, the first-year, full-time students at the study site could have been possibly influenced by numerous factors, including social/individual characteristics, academic and social system, academic and social integration, goal, and institutional commitment. The only way to know for sure would be conducting a survey of these students and asking them the reasons why they dropped out. There are both benefits and challenges of a survey. The benefits of a survey are that it would provide the reason why students dropped out from the institution, such as financial or academic issues. The

challenges of a survey are possible low response rates because the students would have already dropped out from the institution and/or reaching out to students that may not want to respond to the survey because they are no longer associated with the college.

### **Limitations of the Study**

As I detailed in Chapter 1, there were two limitations related to the design of the study: the type and location of the study. The other limitation was the criteria applied to the sample for the study. Data were collected from a community college located in the northeastern part of New Mexico. I selected this location to narrow the scope of the study using newly collected data. This limitation was addressed by focusing on the study group that had the high attrition rate. Although the sample was a smaller group, I focused on the group with a high attrition rate, which provided more information to lead to larger samples.

The second design limitation was the criteria applied to the sample for the study. This limitation was addressed by focusing on the sample for the study, which was first-year students. It was possible to mitigate this limitation because first-year students are used as the basis for institutional improvement efforts and increasing student retention and graduation rates (see Caballero, 2020). Because of design limitations, the results of this study may not be generalizable to institutions that do not share demographics with the study, which includes type and location of institution. The results of this study reflected only students at a public, independent community college in Northeastern New Mexico.

Also described in Chapter 1 was the limitation related to methodological weakness. The methodological weakness of the study is that a quasi-experimental design was used. A quasi-experimental design only allows researchers to conclude the association among comparison of groups on a dependent variable (Burkholder et al., 2020). Therefore, although student retention was lower for first-year, full-time students who utilized the government-funded tutoring programs than students who did not utilize government-funded tutoring programs, I could not draw conclusions because the variables that may have influenced the differences in retention. I cannot conclusively determine the differences I found were a result of the utilization of the resources available to first-year, full-time students.

As I reported in Chapter 4, some statistical assumptions were not met that may have weakened the results of the Chi-Square Test of Association. The assumption of samples used in the study, which were a representative of the larger population of associate degree-seeking students from the 2021 cohort, was not met. A possible reason for not having met the assumption of samples used in the study was not utilizing the entire population of associate degree-seeking students from the 2021 cohort. The assumption of characteristics in associative design, which is that the two groups being associated are equivalent, was also not met in the study. A possible reason for not having met this assumption was that the two groups being associated were equivalent with a larger sample size. The two groups should have been broken into two even groups of 60 instead of 40 students. The result was the failure to reject the null hypothesis, which was: there is no statistically significant difference between government-funded tutoring

programs and student retention. As described in Chapter 4 and shown in Table 1, the observed differences in the retention of students who utilized government-funded tutoring programs supported the failure to reject the null hypothesis.

### **Recommendations**

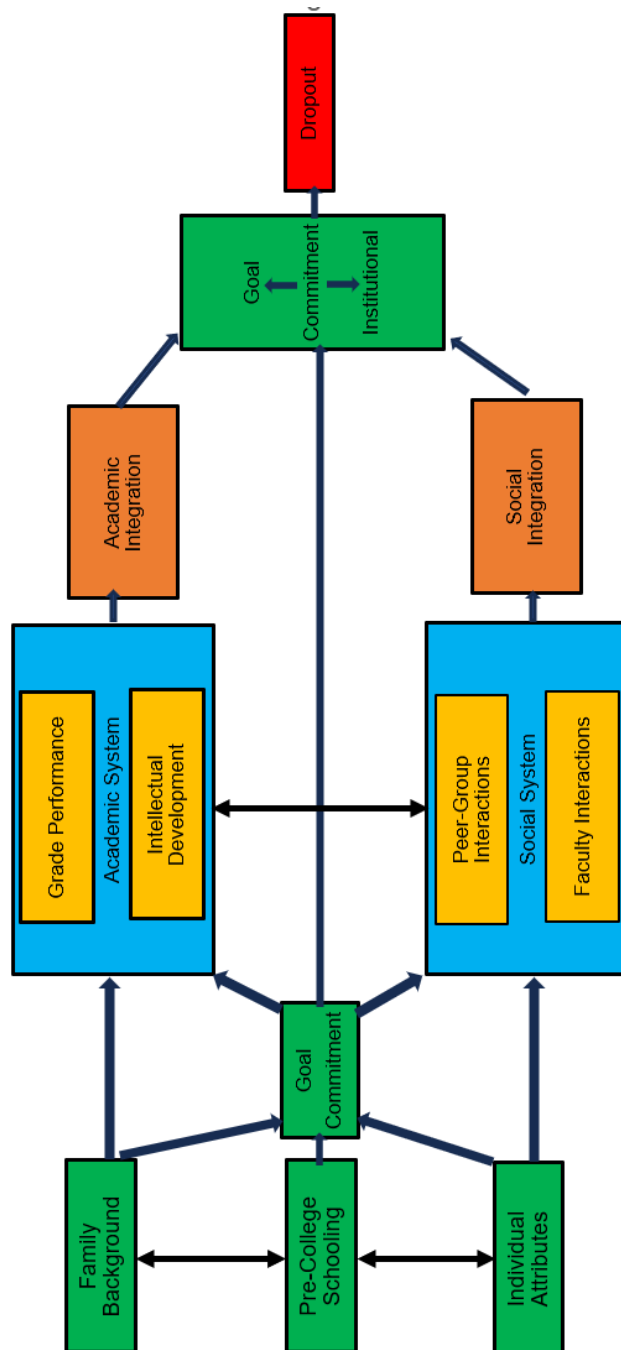
Despite these limitations, in this study I examined student retention and utilization of government-funded tutoring programs. This study provides evidence that there are no differences in student retention among first-year, full-time students who did and did not utilize government-funded tutoring programs. Researchers have found that student retention is impacted by student success in first-year programs, which include federal student financial aid, academic support, and EOF programs (Watson & Chen, 2019). However, the results of the current study pertaining to student retention and utilization of government-funded tutoring programs were different. The results of the current study might have possibly agreed with the findings in the literature review if several factors were taken into account in this study. Perhaps, if a Chi-Square Test of Association was conducted with a larger sample size, the entire population, or on a different cohort, the results could have provided different results and concurred with the literature review in Chapter 2.

Further research could extend this study. I examined the association between student retention and government-funded tutoring program utilization among first-year students within an independent community college in northeastern New Mexico. Further examination is recommended between student retention and government-funded tutoring program utilization among first-year college students. The reason for this

recommendation is that many students may not have had accessibility to government-funded tutoring programs for extraneous factors, such as scheduling conflicts due to employment or number of tutors available at the institution. Continued examinations could provide insight regarding the influence that government-funded tutoring programs may have on student and institutional success. Further research using both Tinto's (1975) student retention theory (Tinto, 1975) and Beans and Metzger's (1985) model (see Figure 3) could provide more reasons why students dropout. A figure of each model is provided to give clarity and a depiction of each of them. Each figure was modified from the original models.

**Figure 2**

*Tinto's (1975) Conceptual Schema for Dropout in College*

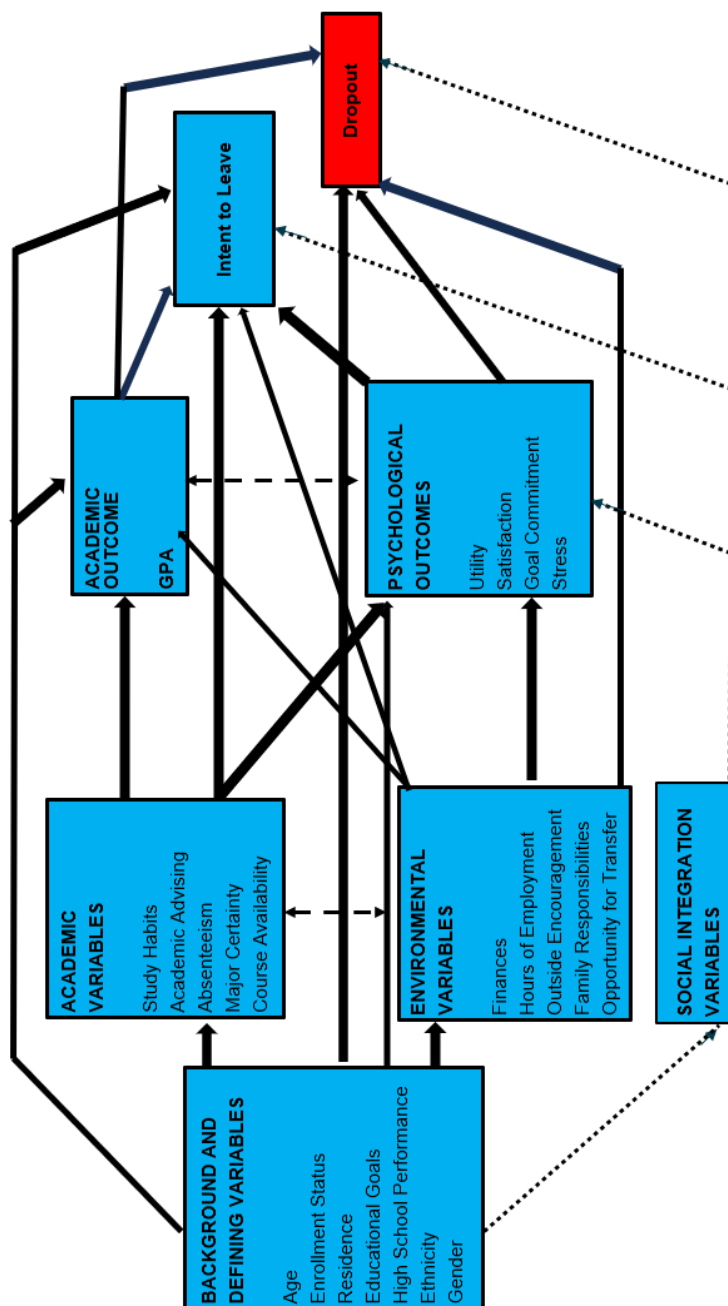


*Note.* Adapted from 1975 Conceptual Schema for Dropout in College, by Tinto, 1975

(<https://doi.org/10.3102/00346543045001089>). In the public domain.

Figure 3

*Bean and Metzner's (1985) Model of Nontraditional Undergraduate Student Attrition*



*Note.* Adapted from a Conceptual Model of Nontraditional Undergraduate Student Attrition, by Bean and Metzner, 1985. (<https://doi.org/10.2307/1170245>). In the public domain.

## **Implications**

This study contributes to the body of knowledge concerned with addressing the problem of student retention by providing evidence related to a factor that may negatively influence student retention. Institutional administrators and faculty can use the evidence provided in the current study showing the retention of first-time, full-time students who did not utilize government-funded tutoring programs were higher than their counterparts who did utilize government-funded tutoring programs. However, this is only one group of students that were studied, and another test on a different group of students may provide a different result. Therefore, it is important to remember that academic and social integration play a critical role in student's choices to remain in college and are a key ingredient to student performance and retention (Bilodeau & Messier, 2018; Davis et al., 2019).

The study is intended to create positive social change by serving as a catalyst to improve the practice of government-funded tutoring programs at the study site, thus improving the retention of study site's first-time, full-time degree seeking student population. The study provides a structure to explain differences in student retention between or among first-year full-time students who utilized or did not utilize government-funded tutoring programs. Having evidence documenting disparities in student retention based on utilization and non-utilization of government-funded tutoring programs should demonstrate to the study site administrators the importance of increased and support of implementing mandatory tutoring in policy and procedures of the institution. Students who are failing in their course should be required to participate in

government-funded tutoring programs. A recommendation for administrators who operate the tutoring centers, should send weekly messages via electronic or telephonic campus wide. The messages will contain information about the government-funded tutoring programs available to students. A recommendation for faculty is to refer their students to the tutoring centers on campus and make it part of their participation grade in the course. The study site's administrators will enhance institutional efforts to support and develop all government-funded tutoring programs, so this will help students in achieving their educational, professional, and civic goals. The relationship between peer mentorship programs and first-year retention, found that peer mentorship programs improve academic performance and student retention (Wilton et al., 2021). First-year full-time students would then be equipped to positively influence future generations through their own positive social change endeavors.

The results of my data contradicted the review literature. As an educator and faculty advisor, utilizing government-funded tutoring programs are very important to first-year full-time students in both my college, and other colleges and universities. Unfortunately, the cohort that was used for the study did not coincide with positivity in the literature. The result of one negative test should not impact the improvement ideas of retaining students. This is in reference to the improvements that were suggested for the study site.

## Conclusion

Retention is a key component in two areas: student and institutional success (Burke, 2019). Efforts to improve retention must include strategies to improve student success. This includes peer mentoring programs, which include government-funded tutoring programs (Caballero, 2020). There must also be positive academic and faculty advising. Caballero (2020) identified strategies college faculty can employ to improve student retention. One strategy is restructuring and formalizing coaching efforts (advisement, mentoring, and tutoring). The strategy is designed to track, support, and improve student engagement and success. Another strategy is encouraging students to grow in the profession in which they are pursuing by using effective communication, sharing their knowledge, and promoting teamwork. Muljanna and Luo (2019) recommended a strategy for improving student retention, such as maintaining continuous engagement with students, active interaction between instructors and students, and institutional support to faculty. Caballero noted that professors are the key for student retention at an institution because they are advisors and guides and most important, are role models. Finally, the utilization of government-funded academic support programs, and developing innovative initiatives to improve student retention rates (Tinto, 2012; Watson & Chen, 2019).

This quantitative research examined the association between student retention and government-funded tutoring program utilization. The RQ that guided this study was: What is the extent of the association between student retention and government-funded tutoring program utilization among first-year students at an independent community

college in northeastern New Mexico? My findings did not support the findings of prior research done on student retention. The results could have been different if a Chi-Square Test of Association was conducted on a larger sample size or conducted on the entire population. Yes, it would have been better to test the entire population because there would be a 100% representation of all first-year, full-time students. Therefore, it is better to test a larger sample size if it is available to researchers. Research is trial and error, and if you can test larger samples, do it because you can obtain more accurate results. The results of testing the entire population could have provided different results and concurred with the literature review in Chapter 2. The utilization of government-funded academic support programs to improve student retention rates, and peer mentorship programs improve academic performance and student retention (Tinto, 2012; Watson & Chen, 2019; Wilton et al., 2021). The analysis done on first-year, full-time students for the population under study concluded that first-year, full-time students did not differ among students who utilized government-funded tutoring programs. Perhaps, examining another cohort could have provided different results. My research can be duplicated at other institutions here in the United States and other countries around the world. Their findings can either support the findings or not support the findings of prior research. The research on student retention will be a continuing saga for years to come.

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