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Graduation and retention of underrepresented minorities and male transfer students who enroll in an academic retention program

Jermaine Jackson

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Graduation and retention of underrepresented minorities and male transfer students who enroll in
an academic retention program

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A Dissertation
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in Community College Leadership
in the Department of Educational Leadership

Mississippi State, Mississippi

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In this study, the research problem was underrepresented minority (URM) male and female transfer students and male transfer students of all ethnicities who were placed on academic suspension, thus removing their chances of being retained and graduating. The purpose of this study was to see to what extent there were relationships between the dependent variables retention and graduation and the independent variables ethnicity, gender, and enrollment in a retention program. A total of 295 participants were included in the study: 119 students who chose to enroll in the retention program and 176 students who chose not to enroll. Descriptive statistics were run to report the demographic data. A binary logistic regression was used to examine the relationship between the demographic variables (i.e., ethnicity, male, retention program enrollment, retention first year, and graduation from a period of 2014–2016). The results yielded that ethnicity had no effect on retention or graduation. Also, the male gender had no effect on retention or graduation. Students were more likely to be retained if they enrolled in a retention program as compared to those who did not enroll. Also, students were more likely to graduate if they enrolled in a retention program as compared to those who chose not to enroll.

The study concluded with a summary of the findings as well as limitations of the study. Recommendations were discussed for practitioners and policy makers to include information for students, faculty, and advisors to encourage career exploration. Future research recommendations included expanding the study to all students, conducting a qualitative study to see why students chose not to enroll in a retention program, and examining the participants' current program of study.

DEDICATION

This dissertation is dedicated to several people in my life. First, I would like to thank God for giving me the ability and perseverance to finish and to my parents Joe Jackson and Jolynn Jackson-Jordan for instilling in me the importance of education. Even though I never thought it would reach this point, you laid the foundation that allowed me to build upon. To my wife Beverlee, thank you for your unconditional love and support, encouragement, and sacrifice. I love you with all my heart. Now it is my turn to sacrifice so you can finish what you started. This would not have happened without you. To my son Jonathan, thank you for your sacrificing daddy time while I was working on this. I love you. Thanks to my sister in-law Dr. Kimberly Muchenje for her support and guidance.

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CHAPTER I

INTRODUCTION

Background

Community college transfer students often struggle to adjust to a university environment. These struggles may lead to academic problems, which may ultimately lead to suspension of the student. This suspension prevents the student from continuing in educational pursuits, thus affecting retention and graduation, two topics of much concern in recent years. Retention programs may assist suspended students in improving their academic performance, thus allowing them the opportunity to continue and graduate.

Transfer Students

Transfer students may be more susceptible to struggles with academic performance, retention, and graduation than are students who begin at the university (Nutting, 2011). A transfer student is one who has taken previous higher education courses at another institution. As many as 50% of students in higher education begin at community colleges (Handel, 2011). For students succeeding in transferring to a university, it helps in having a higher college grade point average (GPA), higher degree aspirations, and transferring more credit hours (D'Amico, Dika, Elling, Algozzine, & Ginn, 2013). Some transfer students who do not have high GPAs can benefit from retention programs designed to improve academic performance and provide an alternate route of staying in school.

Suspension

Academic suspension from a college or university is defined as the sanction for students with a semester GPA of less than 2.0 who have attempted at least 24 hours of coursework and who fail to meet university cumulative GPA requirements. Suspension lasts for at least one regular semester. Usually when suspension happens, it is the result of lack of academic preparedness (Hanger, Goldenson, Weinberg, Schmitz-Sciborski, & Monzon, 2011).

Coll and Stewart (2008) found that students placed on suspension reported lower career decidedness, less satisfaction with their own intellectual development, and lower perceptions of faculty abilities. That is where retention programs come into play; they increase retention of those suspended students by strengthening resiliency levels and fostering better academic skills (Hanger et al., 2011).

Retention

Retention has been a topic which has been discussed for many years. A study in 1938 led by John McNeely was the start of undergraduate retention research and collected data from 60 institutions and observed characteristics, social engagement and reasons for departure (Demetriou & Sciborski, 2011). The study was considered groundbreaking and led to many studies as higher education began to grow.

Throughout the 1950's institutions began monitoring student enrollment (Demetriou & Sciborski, 2011). The Higher Education Act of 1965 produced more access to higher education and provided financial support and created campus support programs to help students succeed (McDonough & Fann, 2007). William Spady's 1970 sociological model on student dropout in higher education was the first to be a recognized retention model (Demetriou & Sciborski, 2011).

Spady's model and Tinto's model (1975) of student integration was derived from Durkheim's suicide model, describing social factors attributing to suicide rates (Demetriou & Sciborski, 2011). Tinto's model linked student attrition to academic experiences and social integration (Demetriou & Sciborski, 2011). A student's success in higher education influences a certain level of commitment a student has to an institution and academic goals (Demetriou & Sciborski, 2011). According to Karp, Hughes, and O'Gara (2010), Tinto was skeptical that social integration was possible for community college students, assuming community colleges provide fewer opportunities for social integration.

A study by Deil-Amen (2005) found to an extent, Tinto's theory may apply to community college students using information networks. The use of information networks through classroom structures helps students learn about the college and initiate relationships that may provide them with information (Karp et al., 2010). This implication may provide transfer students more social integration needed as students transition to a 4-year institution and may lead to higher retention and graduation rates.

Graduation

Studies have shown that transfer students from community colleges are just as likely to graduate with a bachelor's degree as native students who started at a 4-year institution (Lichtenberger & Dierich, 2017). The assumption that students receive the "community college penalty," (p. 4) which refers to the idea that students enrolled at a community college who then transfer to 4-year institutions are less likely to complete a bachelor's degree, has been found to be insignificant (Lichtenberger & Dierich, 2017). But research does show that students who first enroll in a community college take longer to graduate (Lichtenberger & Dierich, 2017).

Research has been clear that the median time to a bachelor's degree for transfer students compared to students who directly enrolled in 4-year colleges is different. According to the National Center for Education Statistics (NCES), the median time to a bachelor's degree for students initially enrolled at a public 4-year institution was 55 months, compared to 63 months for students who were initially enrolled at a community college (Lichtenberger & Dierich, 2017). Bound, Lovenheim, and Turner (2012) observed that time to obtain a bachelor's degree was longer for community college transfer students in comparison to their counterparts from all types of 4-year institutions. These differences suggest a community college penalty. More research is needed to understand college enrollment and the many paths a transfer student may take that may affect time to completion (Lichtenberger & Dietrich, 2017).

Retention Programs

Retention program is defined as a program that is created to provide academic assistance to students who have been placed on academic suspension. It is offered to suspended students who petition to stay in school and improve their academic performance. In colleges it has become the norm, and fairly so since the loss of students indicates loss of revenue for schools because students are no longer registered and paying for school. Numerous retention programs are intended to link students to numerous campus resources and services that enhance integration and foster support (Stephenson et al., 2017). A vital step in enhancing retention of transfer students is a smooth transition from community college to university (Lockwood et al., 2013).

Henderson State University developed a program called Students in Retention, and was for any student on probation, suspension, or admitted with low test scores (Dill, Gilbert, Hill, Minchew, & Sempier, 2010). The students had five requirements of the program: meet with a

counselor twice a semester, meet with their advisor three times a semester, have a conference with a professor early in the semester, submit weekly reports of activities, and participate in two or more hours of study time under supervision (Dill et al., 2010). Those students in the program increased their GPA after one semester by 11% (Dill et al., 2010).

Lamar University's retention program was designed for students on academic probation and the level of intervention was dependent on the students' GPA. Students who had GPAs of 1.8-1.99 received low intervention. Students who had a GPA of 1.5-1.799 received medium intervention, and students who had GPAs of 0.0-1.499 received high intervention (Mann, Hunt, & Alford, 2004).

A retention program at San Diego University, the Bounce Back Retention Program (BBRP), addressed diverse students. Students who were in academic crisis found that this program helped to strength their academic skills (Hanger et al., 2011).

Statement of the Problem

Transfer students entering a 4-year university have several challenges such as unpreparedness, difficult academics, and social integration. "Transfer shock" is a dip in performance for a transfer student after initial transfer (Hills, 1965, p. 203). Transfer students may have lower graduation rates than native students and may be more likely to be placed on academic suspension (Nutting, 2011). The growth of enrollment of 2-year colleges has led to more transfer students enrolling in 4-year institutions, and more understanding is needed for the transfer process, especially if there is a relationship between transfer presence and transfer graduation rates (Nutting, 2011).

Retention programs are designed to improve a students' academic performance, leading to retention and graduation. Transfer students who have failed to meet the necessary GPA and are placed on academic suspension are provided an opportunity to improve their GPA, study skills, and academic standing. Transfer students already come in with several credits depending on their transfer status. The greater the number of credit hours completed, the greater the likelihood of transfer (D'Amico et al., 2013). Although students were unprepared, 20% still were able to transfer to a senior institution (D'Amico et al., 2013). URM students have historically been marginalized and face struggles of belonging and integrating into college campuses, which causes experiences of exclusion, intimidation and alienation (Offidani-Bertrand, Velez, Benze & Keels, 2019). Also, the sense of belonging within URMs can impact academic achievement while in college (Offindani-Bertrand et al., 2019). Gender has also had an impact of college achievement. Males have struggles in college, having lower reading scores, less likely to enroll and persist and graduated at a lower rate than females (Marks, Smith, Madison, & Junior, 2016). Therefore, the problem of the study is transfer students who are URM and male students being suspended from a rural, 4-year land grant institution, thus removing their chances of being retained and graduating.

Purpose of Study

The purpose of this quantitative study was to investigate if retention and graduation rates for suspended transfer students are dependent on ethnicity, gender, or participation in a retention program at a rural, 4-year land grant institution. The retention program is designed to allow transfer students who have been suspended to enroll in a program to improve their grades. This study used existing data from the university for students suspended from 2014-2016.

Research Questions

1. What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?
2. What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?

Theoretical Framework

The Morrill Land Grant Act of 1862 diversified the collegiate curriculum by offering degrees in agricultural and mechanical arts (engineering). This made college more appealing to a broader group of students who may not have been interested in pursuing a traditional Bachelor of Arts degree. Over the last 100 years, the national graduation rate for undergraduates was around 50%, which means only half the students in higher education graduate (Demetriou & Sciborski, 2011).

Berg and Lyon (2004) defined undergraduate retention as an institution of higher education's ability to retain a student from admission until graduation. Early studies of retention occurred in the 1930's and focused on student mortality or the failure of students to graduate (Demetriou & Sciborski, 2011). Undergraduate retention began to take shape in the 1960's with the publications of Gekoski and Schwartz's (1961) *Student mortality and related factors*, Panos and Astin's (1968) *Attrition among college students*, and Feldman and Newcomb's (1969) *The impact of college on students* (Demetriou & Sciborski, 2011). This led to the landmark publication of Tinto's (1975) student integration model (Demetriou & Sciborski, 2011).

The well-known theoretical framework on college student retention is Tinto's (1975) integration model. Tinto "purports that the student's individual characteristics (including

individual attributes, family background, and high school experiences) directly influence the student's commitments to the institution, the goal of graduation, and ultimately, the departure decision" (Xu & Webber, 2018, p. 4).

There were limitations to Tinto's model. One limitation was that it did not address finances. A few studies have shown that finances can influence student retention (Xu & Webber, 2018). This can greatly influence student's retention because the student may lack the funds to continue in school. Another restriction to Tinto's (1975) model was the lack of consideration of different educational experiences of students from different backgrounds. Different backgrounds and experiences shape how students interact and engage in college; this may affect them getting a degree or not.

Braxton et al. (2004) presented a revision to Tinto's (1975) model emphasizing social integration as a factor in retention. A student's gender, race, ethnicity, socioeconomic status (SES), and academic ability, among others, play a part in a student's commitment to attaining a degree (Xu & Webber, 2018). URM students have lower academic ability and are more likely to have negative outcomes that may lead to being placed on probation or suspension (Xu & Webber, 2018).

Retention programs strive to provide transfer students the needed services to retain them (Grillo & Leist, 2013). With grades playing the most important role in a student's retention, focusing on academic support such as tutoring and supplemental instruction can have a positive effect on a student's performance (Grillo & Leist, 2013). That suggests that more retention programs need to incorporate tutoring and supplemental instruction programs to increase student learning and development (Grillo & Leist, 2013).

Definition of Key Terms

1. Academic suspension – For this study, suspension is defined as the sanction for students with a semester GPA of less than 2.0 who have attempted at least 24 hours of coursework and who fail to meet university cumulative GPA requirements. Suspension lasts for at least one regular semester.
2. Graduation – the award or acceptance of an academic degree or diploma (Merriam-Webster.com).
3. Retention – an institution of higher education’s ability to retain a student from admission until graduation (Berg & Lyon, 2004).
4. Retention program – For this study, the retention program is defined as a program that was created to provide academic assistance to students who have been placed on academic suspension. It is offered to suspended students who petition to stay in school and improve their academic performance.
5. Transfer student – a student who has taken courses at another college or university and then transfers (Nunez & Yoshimi, 2016).

Overview of Method

“Research design provides the blueprint for conducting a research study and shapes what kind of knowledge is generated by the study” (Cook & Cook, 2016, p. 190). The research design that was used in this research was the quasi-experimental.

Chiang, Jhangiani, and Price (2020) stated:

Quasi-experimental research is research that resembles experimental research but is not true experimental research. Although the independent variable is manipulated,

participants are not randomly assigned to conditions or orders of conditions. Because the independent variable is manipulated before the dependent variable is measured, quasi-experimental research eliminates the directionality problem. But because participants are not randomly assigned—making it likely that there are other differences between conditions—quasi-experimental research does not eliminate the problem of confounding variables. In terms of internal validity, quasi-experiments are generally somewhere between correlational studies and true experiments. Quasi-experiments are most likely to be conducted in field settings in which random assignment is difficult or impossible. They are often conducted to evaluate the effectiveness of a treatment—perhaps a type of psychotherapy or an educational intervention. (p. 135)

A case study of one program at one university was conducted. A case study is a descriptive and exploratory analysis of a person, group, or event (Press Academia, 2018). Within the case study, archival data were used. Archival data are information kept in current channels such as electronic records, libraries, and old-fashioned (paper) files. The information was retrieved from the retention program and the institutional research office at a rural land grant institution for the years 2014-2016. It was assumed that students were juniors or seniors since they had transferred, and this gave each student at least three years to graduate. Participants were transfer students who had been placed on academic suspension. These students had the option to enroll in a student retention program or not to enroll in the program and remain out of school for one semester. Following that semester of sitting out, they could return. Table 1 lists the research questions, data collected, and data analysis procedures.

Table 1

Research Questions, Data to be Collected, and Data Analysis Procedures

Research Questions	Data Collection	Data Analysis
What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?	Student returned year following suspension: Yes or No	Logistic regression test of dependence (categorical data) to assess if retention is or is not dependent on program participation
What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?	Student graduated: Yes or No	Logistic regression of dependence (categorical data) to assess if graduation is or is not dependent on program participation

Delimitations of the Study

- The study only included transfer students who were suspended from 2014-2016.
- The study was only conducted at one rural, 4-year land grant institution.
- The study only considered the effects of enrollment in a retention program although numerous variables may affect student retention and graduation.
- The study did not include any white female students.

Significance of the Study

This study was designed to investigate the effects of ethnicity, gender, and a retention program for suspended transfer students in relation to retention and graduation. It can provide beneficial information to community college and university practitioners. If the retention of

transfer students is increased by participation in the program, practitioners may choose to provide more supportive resources such as tutoring and social integration for transfer students in order to combat the necessity to enroll in the retention program. This may help transfer students increase or maintain good academic standing by providing study skills and tutoring. Also, this study can provide additional literature on transfer students transitioning to a 4-year institution and successfully graduating. Finally, this study can help inform policies and/or procedures to benefit community college transfer students seeking a bachelor's degree. Providing programs that support transfer students can benefit both the student and the institution.

Summary

This chapter provided the groundwork for the study through the statement of the problem, purpose of the study, research questions, definition of terms, and significance of study. It also provided an overview of the methodology and noted delimitations. The chapter focused on concepts related to transfer students, suspension, retention, graduation, and retention programs. In summary, the study is intended to show if retention and graduation rates for transfer students who have been suspended are dependent on participation in a retention program, ethnicity, or gender.

CHAPTER II

LITERATURE REVIEW

Over the past few decades, student retention and graduation rates have been highly documented and explored topics. Colleges have been trying various ways to increase student retention by implementing retention programs. While all retention programs may be different in some ways, the main goal of retention programs is always the same: to get more students to stay enrolled in school and to graduate. A lot of research related to student retention has derived from Tinto's (1975) integration model. His model shows that retention of at-risk students can be credited to students' characteristics, goals, location, and social and academic integration (Dill et al., 2010).

Transfer Students

Research on transfer students has been well documented. Transfer students are considered students who have taken courses at another college or university and then transfer. The focus of this study was on transfer students who came from community colleges. According to the American Association of Community Colleges, 44% of U.S. undergraduates begin their education at a community college (Nunez & Yoshimi, 2016). Since the early 1900's students have transferred from one college to another pursuing a bachelor's degree (Bragg, 2017). Depending on their classification, they may begin as a freshman, sophomore, junior or senior, which can affect persistence and graduation (Ishitani, 2008). For example, transferring as a

junior would bring a student closer to graduation and more committed to completing the program versus a transfer freshman (Ishitani, 2008). This also can cause a students' transfer GPA to vary depending on amount of credits or classes taken.

According to Hill (1965, p. 203), "transfer shock" occurs when there is a dip in transfer students' grades during the first semester after transferring to a 4-year institution. Porter (1999) found GPAs for both native and transfer students increased by classification, but transfer students earned lower GPAs than native students. Even with the evidence of "transfer shock," Diaz (1992) suggested that a majority of transfer students recovered their GPA within a year. A transfer student's GPA is an important factor that can influence his or her persistence to be retained and achieve a timely graduation. Considering the time-varying nature of their GPA, more research is needed to determine the impact of persistence for transfer students (Ishitani, 2008).

According to McGuire and Belcheir (2013) there are multiple types of transfer students depending on number of credits transferred, GPA, and whether they have completed developmental coursework or not. Some students may transfer as a sophomore while others may transfer as a junior with an associate degree, and their GPAs may vary depending on academic preparedness.

Transfer students display a wide range of characteristics that may influence their completion of school when compared to students who start at a 4-year college (Craig & Ward, 2008). Transfers students may be older, commute to school, have lower high school grades, be employed more hours, have responsibilities outside school such as family or work, have limited financial resources, and have lower aspirations (Craig & Ward, 2008). Because some transfer students are older, they did not enter college directly after high school, and that wait may cause a

loss of content knowledge and poor study habits especially in math and science (Craig & Ward, 2008).

Transfer students who are at the point of being on academic probation, academic suspension or dismissal share some distinctive characteristics. According to Isaak, Graves and Mayers (2007), they have lower social skills when compared to their counterparts. Social media has replaced, to a certain extent, the need for face-to-face interaction with peers and college personnel when it comes to college students. If they are not social within the campus environment, it does not mean that they are not social in other ways such as Facebook, Instagram, Snapchat, etc. (Isaak et al., 2006).

Transfer students also experience “student swirl” at community colleges. Student swirl is the movement of students in and out of coursework over a certain period of time (Wang & Pilarzyk, 2009). As defined by the NCES, “it reflects the non-traditional nature of community college students nationwide” (Wang & Pilarzyk, 2009, p. 212). The community college students may go to school for a semester or two, stop, and then start back.

Some transfer students have other obligations or responsibilities that require their time, and school is then put aside until they can re-enroll. Another characteristic is that some transfer students tend to work full-time and part-time jobs while going to school full time. Some transfer students are married and have children as well (Duggan & Pickering, 2008). Those factors can cause student academic problems that may lead to students not completing school and low motivation (Wang & Pilarzyk, 2009).

Transfer students must have a desire to face their challenges and stay motivated. Motivation can be improved or reduced in college for students depending on the circumstances (Tinto, 2017). If students are having a good year, then they will be motivated to do well versus

students who are having a bad year and may not be motivated to do well. Being motivated can improve self-efficacy and help the students reach their goal of graduating (Tinto, 2017). Students must know their purpose for attending college because lack of clearness can become a challenge to completing college (Dietshe, 2009).

According to Tinto (2017), “students with different goals and motivation for going to college are likely to be differentially affected by their experiences in college” (p. 256). This can lead to problems with self-efficacy. According to Bandura (1977), “self-efficacy is typically defined as a person’s belief in their ability to succeed in a specific situation or at a specific task” (p. 191). Having strong self-efficacy helps with completing goals by putting more effort into the work whereas weak self-efficacy can affect their success and goals (Tinto, 2017).

As transfer students matriculate into 4-year institutions, it is important that they have a sense of belonging. Students will come to see themselves as a member of the college community and incorporate with students, faculty and staff (Tinto, 2017). That can help provide a foundation of friendships and advocacy from faculty and staff that will help with their engagement into the campus community. Tinto (2017) stated, “students who perceive themselves as belonging are more likely to persist because it leads not only to enhanced motivation but also a willingness to engage others in ways that further persistence” (p. 258). When students are uncomfortable and feel out of place, they may experience isolation that leads to lack of motivation and can be detrimental to their persistence in school.

The importance of comprehending what is read is key to successfully passing assignments and exams. This can be deeply concerning for transfer students. Many of them experience “transfer shock” where their grade may dip the first or second semester of being in a 4-year institution (Townsend & Wilson, 2009, p. 408). It is important to have resources and

programming available for those transfer students so they can stay in school and set a path of success. They could be redirected into a different major. For example, transfer students may have career aspirations of becoming engineers, but once they get into the coursework they struggle, and institutions must find ways to guide them into other majors.

Community colleges serve multiple purposes for different students. “In 2010, 40 percent of all students beginning postsecondary education enrolled first in a two-year college” (Cohen, Brawer & Kisker, 2014, p. 53). According to Laanan, Starobin and Eggleston (2010), students enjoy flexible schedules, low cost, small class sizes, convenient location, and quality education as reasons why they choose a community college over a 4-year institution. Some students choose community colleges for various reasons; they are not ready for a 4-year university academically, or they cannot afford a 4-year institution. Another issue that has been studied regarding transfer students is class size. According to Townsend and Wilson (2009), transfer students are accustomed to smaller classes where they can interact with the instructor and the faculty knows their name. After leaving a community college, transfer students come into classes of 150-300 students, which can be a difficult adjustment (Townsend & Wilson, 2009).

Transfer students even from large community colleges generally have small class sizes, maybe no more than 25-30 students. Four-year institutions may be able to provide similar smaller class sizes, depending on the subject being taught, but for the most part classes are larger; they vary from 60-300 students. That can lead to less social interaction due to students not knowing anyone as opposed to native students who may have had interactions already with their classmates. Some 4-year institutions limit class size, which may encourage participation and accountability, and that can be a benefit for transfer students who are accustomed to smaller class sizes (Millea et al., 2018).

For a large percentage of minority, at-risk, first-generation students, community colleges play an important role serving as a pathway to a baccalaureate university (Laanan et al., 2010). This shows that SES plays a factor in what college a student chooses to attend but also that community colleges are useful in creating economic equity for diverse populations (Laanan et al., 2010). Community colleges have been essential to the progress of students with lower levels of academic preparedness, among other characteristics that had limited a person's opportunity for postsecondary enrollment (Cohen et al., 2014).

Suspension

A transfer student in jeopardy of being placed on academic suspension may have poor class attendance. Institutions for some time have pushed the importance of attending class regularly (Humphrey, 2006). Students who do not attend class miss out on valuable instruction and find themselves behind. Time management is another key issue. Students who wait until the last minute to start on assignments or cram study material the night before an exam tend not to do well. Issak et al. (2006) also stated that these students have poor reading comprehension. Working or having children decreases the amount of time a student has to prepare for coursework, and that can lead to academic probation, suspension, or dismissal (Duggan & Pickering, 2008). Since more transfer students are more likely to have lower GPAs than native students, more needs to be done regarding them having more defined career goals (Nutting, 2011).

Transfer students coming into a new environment can face an overwhelming situation. Psychological barriers can hinder a student from his/her full potential. The concept of locus of control can play a part in a student's decision making. Internal locus of control describes a

person's sense of control, while external locus of control describes his or her lack of control (Wang, 2009). Since internal locus of control may lead to a positive outcome of successfully persisting towards their degree goals, there is reason to believe that external locus of control would do the opposite (Wang, 2009).

Another struggle for transfer students is self-concept. Self-concept is described as an individual's thoughts and feelings with reference to self (Wang, 2009). Although most research has focused on preschool, elementary, and secondary school, some existing research for college students shows that transfer students with a positive self-concept are more likely to follow their educational goals than those with a negative self-concept (Wang, 2009). According to Wang (2009), a third psychological attribute is educational expectation, which is the measure of whether the student is expected to receive a baccalaureate degree. The amount of effort students put into their academics depends on whether they perceive the possibility of obtaining the degree.

Transfer students can have multiple barriers that may impede their progress in school. For one, faculty and other staff members of the receiving school may lack awareness of the needs and experiences that transfer students have encountered (Nunez & Yoshimi, 2016). Students' sense of belonging from the start is questioned since their instructors and staff members are not able to relate to them. Faculty members, administrators and other staff members can lack awareness of the needs and experiences of transfer students (Nunez & Yoshimi, 2016).

Once a transfer student enters the baccalaureate institution, many have lower academic performance entering their first-year post-transfer than freshman (Aulck & West, 2017). Transfer students struggle finding accessible faculty or staff to help them navigate a new setting and find it difficult to meet academic expectations and make friends (Nunez & Yoshimi, 2017). Transfer

students experience isolation in their new 4-year institution and view their community college as a more supportive environment (Nunez & Yoshimi, 2017). Aside from academic struggles for transfer students, the environment plays a role as well. Outside factors such as working long hours and having dependents can influence transfer students performing poorly in school (Wang, 2009).

The performance of transfer students has also led to the idea of “transfer shock;” Hills coined this term in 1965 referring to a post-transfer drop in student performance their first semester of enrollment. Students who experience this are less likely to graduate than entering freshman (Nunez & Yoshimi, 2017). Peng and Bailey (1977) researched disparities between transfer and 4-year college native students, and the findings of their study suggest that these two groups of students were different in several ways. In particular, Peng and Bailey (1977) stated that native students had higher GPAs than those of first-year transfer students. Porter (1999) discovered that GPAs for both native and transfer students improved by class, but still transfer students earned lower GPAs than native students. While the findings from several studies suggest that transfer students are prone to earn lower GPAs than native students at major institutions, Diaz (1992) indicated that the majority of transfer students are able to recover from transfer shock within a year. “Moving from one institutional culture to another, transfer students may experience marginalization and a struggle to feel a sense of validation” (Nunez & Yoshimi, 2017, p. 175).

Retention

Student retention is an important topic for the United States’ institutions and researchers, particularly to increase or sustain the country’s long-term success economically (Smith &

Cumpton, 2012). The United States has digressed from 1st to 16th in the world with the number of students completing degrees, so the concern is legitimate (Kimbark, Peters, & Richardson, 2017). President Obama encouraged an increase in students graduating from college by 2020 to successfully prepare for an ever-changing workforce. The national average for bachelor's degree completion within five years in 2011 was only 47.9% (ACT Inc., 2011) and increased to 55% within six years (Spradlin, Rutkowski, Burroughs, & Lang, 2010). The understanding of student retention is necessary to help increase graduation rates.

Students do assume the responsibility for their actions that cause them to be placed on probation or academic suspension (Hanger et al., 2011). They may be left feeling guilty or ashamed of themselves. It is important that institutions have an attitude of caring and support while providing programming that is helpful for the students to improve (Hanger et al., 2011). Some transfer students were high-risk, more prone to struggle academically, when they were accepted into the institution. It is important that the institution provide the necessary tools needed so that students can become successful. Tools may include an orientation class going over policies and procedures, study skills, reading skills, identifying specific learning styles and career exploration (Hanger et al., 2011).

At most colleges and universities, a student who does not maintain a 2.0 or higher is placed on academic probation, which warns students of their performance deficiencies (Holland, 2005). Probation can lead to academic suspension depending on the institution's academic policies (Houle, 2013). Student retention programs come into play to help struggling students ensure better academic performance, and this research proposes to study the effectiveness of retention programs for transfer students.

College retention programs have become the norm, and rightfully so, since the loss of students leads to lost income for schools because students are no longer enrolled and paying for school. Many retention programs are designed to connect students to various campus resources and services that increase integration and nurturing support (Stephenson et al., 2017). An important initial step in improving retention of transfer students is a smooth and seamless transition from the community college to the university (Lockwood et al., 2013).

Retention Programs

Transfer students deal with several struggles that can lead to withdrawing or failing out of school. It is important for universities to find ways to help retain them. Strategies for new transfer students such as orientations or workshops can help students better transition into the university (Laanan et al., 2010). Retention programs are put in place to combat the struggles of transfer students, and counseling services can also be helpful.

A study called Preparation for Achieving Scholastic Success (PASS) was conducted over a 12-week span through a university's counseling center. The students' participation was voluntary due to a counselor not forcing a student to change. There were 91 participants who were at risk with a GPA greater than 1.25 but lower than 2.0 on a 4.0 grading scale. The demographic was predominantly white and female with 73% females, 27% males, 82% white, 14% black, and 4% other. A control group was chosen that matched the GPA of students in PASS who chose not to participate in P.A.S.S. Program participants' GPAs were 1.93 versus the control group of 1.62. A counseled student's academic progress and retention were shown to be better than that of students who did not receive counseling, with 69% of program participants

obtaining a GPA of 2.0 or higher as opposed to 43% of those who did not participate (Engle, Reilly & Levine, 2004).

Overall, the more support students received, the more success they had (Engle et al., 2004). Counseling intervention is conducive to helping transfer students increase the likelihood of graduating. Other interventions may come from an advisor. Some call it intrusive advising or interventions, getting to the main issue as to why a student may be struggling. Intrusive interventions provide students face-to-face contact with advisors designed to improve study skills, test-taking, time management, goal setting, and communication skills (Isaak, Graves, & Mayers, 2006).

One college that developed strategies to retain at-risk students was Henderson State University. The program, called Students in Retention, was for any student on probation, suspension, or admitted with low test scores (Dill et al., 2010). The students had five requirements of the program: meet with a counselor twice a semester, meet with their advisor three times a semester, have a conference with a professor early in the semester, submit weekly reports of activities, and participate in two or more hours of study time under supervision (Dill et al., 2010). Those students in the program increased their GPA after one semester by 11% (Dill et al., 2010).

Another retention program was at Lamar University and was called Monitored Probation; it was designed for students on academic probation or suspension. The level of intervention was dependent on a student's GPA. Any student with a GPA of 1.8-1.99 received low intervention; medium intervention was provided for students with a GPA between 1.5 -1.799, and high intervention was for any student with a GPA of 0.0 – 1.499 (Mann et al., 2004). All participants were required to attend monitoring sessions with the retention coordinator. Students with low

intervention were required to attend one session about study skills and time management, and medium intervention students were required to attend three academic enhancement workshops including note-taking, text anxiety reduction, goal setting, time management, memory tricks, and stress management (Mann, et al., 2004). The high intervention set of students were required to enroll in a 2-credit hour course called Learning and Study Skills, a learning styles course combining learning theory research and practical intervention to improve academic performance (Mann et al., 2004). All three levels within the Monitored Probation programs had a higher mean increase in GPA in comparison to the control group who did not participate (Mann et al., 2004).

The BBRP at San Diego State University, designed in 2004, was implemented to address retention of diverse students. The goal of the program was to strengthen the skills of students who found themselves in academic crisis (Hanger et al., 2011). It is important to note that some students in an academic crisis may not have acquired the necessary skills to be successful while others may just not be motivated to excel in college. Students in academic distress are more likely to be weak socially and have less-defined goals and more financial difficulty (Kopp & Shaw, 2015). Certain skills such as good study habits and time management are key to doing well academically, especially for a student who is already at risk (Hanger et al., 2011).

A similar retention program at The University of Central Florida emphasized equipping the future Science, Technology, Engineering, and Math (STEM) workforce because discouragement, an overwhelming curriculum, difficulty in math class, and poor teaching were some of the reason's students left STEM majors (Dagley et al., 2016). The EXCEL program was sponsored by the National Science Foundation because the President's Council of Advisors stated that the United States needed to add one million graduates in STEM to hold preeminence in science and technology (Dagley et al., 2016). Since then, colleges and universities have

implemented learning communities to help foster increased student involvement through activities and student-faculty interaction (Dagley et al., 2016). The EXCEL program is a learning community where students reside and interact socially. Students in the EXCEL program were retained at a higher percentage than those who did not participate. Overall, EXCEL students increased retention by 23% for first-year retention over their comparison group, and URM were retained at a higher rate than their comparison group as well (Dagley et al., 2016).

Another way of fostering academic success for transfer students is leaning communities. According to Love (2012), “Learning communities are one reform effort to change how students, faculty, and student affairs professionals work together to form a more holistic learning experience, both across and within disciplines” (p. 5). Learning communities had usually been set aside for first-year freshman. One study by Scott et al. (2017) found positive outcomes for upper level STEM students. This pilot study proposed by transfer students entering sociology majors was called Transfer Student Learning Community (TSLC). It could be applied to any major (Thomas, Walsh, Torr, Alvarez, & Malagon, 2018). The TSLC was a 3-semester cohort-based model for transfer students with the first semester requiring a writing and research methods course, the second semester requiring a statistics and sociology for career success course, and the third semester requiring a social theory course. The average GPA for the pilot group was slightly higher than non-participants (Thomas et al., 2018). This program showed promise and suggested a particular benefit for URM transfer college students by improving their academic success and retention (Thomas et al., 2018).

Males

Retention has been an issue for colleges across the country. It is especially evident when it comes to males. Males have a higher rate of academic difficulties and lower graduation rates when compared to females (Swanson, Anglea, Vaughan & Wilkinson, 2017). Males have lagged behind females when it comes to literacy. The National Assessment of Educational Progress shows that males at every grade level are behind females by 1.5 years in reading (Pagnani, 2013). Male students in every ethnic group besides Asian Americans are no longer earning college degrees at rates higher than the previous generation (Ryu, 2009).

In 1987, males earned college degrees at a rate of 22.3% and women at a rate of 21.7%. Fast-forward to 2007, 31.4% of women earned degrees as opposed to 23.5% of men earned degrees (Spruill, Hirt, & Mo, 2015). Pike, Hanson, and Childress (2014) found that being a male was associated with a lower likelihood of graduation. Evidence has suggested that males have a different mindset than females. A qualitative study conducted by Kleinfield (2009) found that male students are reluctant to ask for help, are lazy, and have difficulties planning or working. That is why retention programs are an important tool to help combat this downward trend and allow males to reach their fullest potential.

In a predominantly white institution (PWI), African American males have failed to be identified as having problems on campus by administrators, faculty, and staff, which has led to the need for retention program for this population of students (Brooks, Jones, & Burt, 2013). Robertson and Mason (2008) suggested three recommendations to universities to support African American male students at PWIs. The first recommendation is to offer pre-college programs, which give students exposure to campus life and allows them to build on skills necessary to be successful. The second recommendation is for university administrators to make a conscious

effort to recruit and retain African American faculty and staff. This allows African American males to see people who look like them in successful roles. The last recommendation is to add courses that speak to the needs of African American people. History does not accurately account for and credit the contributions of people of color. History portrays that the contributions of whites hold more significance than do those of black or others of color (Brooks, Jones, & Burt, 2013).

A study on cultural and linguistically diverse students was performed to examine how interventions within a retention program contribute to persistence and academic achievement, specifically amongst African American males. Students were selected based on being male, classification, and ethnicity (black), with 136 participants and 90 completing the program. Students were recruited for the retention program by an allocation of \$500 per semester for each participant (Brooks, Jones, & Burt, 2013). Next, students enrolled in a weekly 1-hour seminar course pertaining to the topic of retention of blacks in college. Administrators administered the Retention Program Pretest and Posttest Assessment which assessed self-esteem, academic acculturation, social integration, and mentorship relationships (Brooks et al., 2013). The results suggest that the program had a positive impact on the academics of black males with 95% of the students persisting to the next semester and 90% having a GPA of 2.0 or higher, with 48% having a 3.0 GPA or higher (Brooks et al., 2013). This retention program suggests that to encourage persistence and graduation, this study can be replicated for transfer students who are URM males.

Underrepresented Minorities (URM)

While males are having their share of challenges in college, so are minorities. URMs are considered African American, Hispanic/Latino, and Native American/Alaska Native (Patterson Silver Wolf, Taylor, Maguin, & BlackDeer, 2019). Retention rates for URM has the greatest gap with a 20-point difference when compared to nonminority peers (Patterson Silver Wolf et al., 2019). Enrollment for minority students has been on the rise between 1976 and 2011, with American Indian increasing 0.9%, 4% for Alaska Native groups and 14% for Hispanics (Swanson et al., 2017).

Within the URM population, Latinos are the largest and fastest growing minority group (Carales, 2020). By 2060, Latinos are projected to represent 29% of the entire United States population and that increase in population will increase more Latino postsecondary education attainment (Carales, 2020). According to Adelman (2005), Latinos are likely to enroll in a community college due to it being less expensive and offering an alternative path to degree completion. “For example, more than a third who first enrolled in 2-year public institutions have been shown to go on to complete a bachelor’s degree” (Carales, 2020, p. 196).

A study was conducted to identify factors of educational attainment outcomes for Latino students who started at a community college. The study wanted to fill gaps of Latino community college students in three ways: “(a) by utilizing a national sample of Latina/o community college students, (b) by using a theoretically driven set of variables to examine individual factors that affect Latina/o community college outcomes, and (c) by separately predicting a variety of success outcomes—including certificate and associate degree completion—that have not been extensively studied” (Carales, 2020, p. 197). The method of this study was a logistic regression using a national sample of beginning postsecondary students of 16,700 students. The sample was

limited to 800 Latino students whose first postsecondary education was at a 2-year community college (Carales, 2020). The results of the study showed that half of the sample of Latino students who transferred to a 4-year institution or earned a degree were male (Carales, 2020).

The results also were found to be:

...related to demographic or precollege variables including primary language spoken in the home, citizenship status, socioeconomic status, degree expectations; college experiences including academic integration, first-year college grade point average (GPA), enrollment intensity, co-enrollment; and environmental pull factors including the receipt of a federal student loan and Pell Grant. (Carales, 2020, p. 195)

The study highlighted the importance of financial assistance to promote successful education attainment in Latino students (Carales, 2020).

Other issues that URM face are college readiness and financial barriers. College readiness is defined as the “multidimensional set of skills, traits, habits, and knowledge that students need to enter college with the capacity to succeed once they are enrolled” (Arnold, Lu, & Armstrong, 2012, p. 2). Conley’s (2011) model focused on key content approaches, key content understanding, academic performances, and contextual skills and awareness. Meanwhile, Duncheon (2015) pointed college readiness into three categories: cognitive academic factors, noncognitive academic factors, and campus integration factors. Arnold et al.’s (2012) “ecological college readiness model accounts for the complexity of the interacting personal, organizational, and societal factors, and most aptly account for student and contextual differences based on race, language, first-generation college status, and other social and cultural indicators” (p. 91). This

model speaks to some scholars' fears with using a generalized, one-size-fits-all method to college readiness (Barnes & Slate, 2013).

Minority students are more likely to come from low-income households and are disproportionately placed in lower academic tracks (Swanson et al., 2017). Community colleges prepare students to transfer to 4-year institutions, and many URM start their academic careers at community colleges (Mooring & Mooring, 2016). For those students who begin at a community college, only 10.2% earned a bachelor's degree within six years and nearly half (48.8%) did not earn a degree from any institution and were no longer enrolled anywhere (Mooring & Mooring, 2016). With increasing URM in colleges, it is important that colleges have retention programs to ensure transfer students are able to be retained and graduate.

Another challenge that URM college students may have to face is homesickness. "Homesickness is distress or functional impairment caused by actual or anticipated separation from home and attachment objects" (Thurber, Sigman, Weisz, & Schmidt, 1999, p. 185). URM college students dealing with the stress of transitioning to college among other stressors may develop homesickness (Wittrup & Hurd, 2019). URM students who attended PWIs more than likely experienced their new settings as unfamiliar and found that the more dissimilar the environment compared to their home community, the greater the risk of homesickness (Wittrup & Hurd, 2019). "Prior to college, underrepresented students may have had less exposure and access to the types of middle-class social experiences that are normal at [predominantly white institutions]" (Wittrup & Hurd, 2019, p. 2). Homesickness and transition to adulthood may also cause URM students greater risk of depressive symptoms or mental illness (Wittrup & Hurd, 2019).

Although most students have to adjust to a new environment, URM students are more likely to experience social exclusion and marginalization (Wittrup & Hurd, 2019). These experiences can also make them feel uneasy in the classroom. A study found that 27% of students of color reported feeling their contributions in class were minimized (Wittrup & Hurd, 2019). According to Musoba and Krichevskiy (2014), Black and Latino students may have a feeling of needing confirmation that gives them a sense of belonging in higher education. Feedback from faculty members helps validate good performance and encourages students who may require improvement (Barbera, Berkshire, Boronat, & Kennedy, 2017). This kind of practice by faculty members may help transfer students adjust to their new campus environment and promote academic success.

One way of reducing those feelings may be to get involved in an extracurricular activity such as clubs or student organizations. Opportunities to connect with peers can promote a healthier college adjustment (Wittrup & Hurd, 2019). A study of 340 URM students revealed the potential of extracurricular involvement as students experienced decreased homesickness and depressive symptoms. The students self-reported as being a first-generation student, received Pell grants and was a part of one ethnic group of URM. Surveys were administered during the middle of a fall and spring semester. Results showed that participating in extracurricular activities may be linked with decreases in homesickness and depressive symptoms for URM students attending a PWI (Wittrup & Hurd, 2019). Efforts to provide more URM college students opportunities of extracurricular activities are needed to help those students lessen homesickness and depression symptoms in the future.

Graduation

Community colleges have long had the goal of preparing students to transfer to 4-year institutions to obtain a bachelor's degree. Graduating in a timely fashion from a 4-year institution has been impacted by internal and external factors (Mooring & Mooring, 2015). Wang (2009) developed a logistic regression to predict degree attainment based on factors of gender, socioeconomic status, high school curriculum, education expectation upon entering college, and GPA from the community college for URM (Wang, 2009). The data showed that Black students graduated at a slower rate than other URM students, and Hispanics and Asians graduated at a higher rate (Mooring & Mooring, 2015). Additional workshops and mentoring are essential to prevent transfer students from falling through the cracks at their new institutions and to ensure they are more likely to earn their bachelor's degree (Mooring & Mooring, 2015).

According to the National Student Clearinghouse Research Center, 15.8% of students who started at a community college completed a bachelor's degree (Daddona, Mondie-Milner, & Goodson, 2019). Furthermore, if a student earns his or her associate's degree prior to transferring, the probability of graduating from a 4-year institution is increased (Daddona et al., 2019). Shugart and Harrison (2011) suggest that increasing the number of students with an associate's degree by 10% by having interventions for students who do not have an associate's degree has the potential to increase transfer students' bachelor's degree completion.

Summary

Student retention and graduation has been a driving force for a long period of time ensuring that transfer students matriculate and graduate. Many factors can influence a student's progress such as being male and URM. A transfer student's academic standing, such as

academic suspension, can play a part in a transfer student's retention and graduation. Having student retention programs can help resolve inside and outside forces to guide students to succeed in college.

CHAPTER III

METHODOLOGY

The purpose of the study is to examine the effects of enrollment in a student success retention program for suspended transfer students when considering retention and graduation. Chapter III of the study discusses the research design and why it was used. It also includes the research questions, research site, participants, instrumentation and data collection methods, procedures for data analysis, and chapter summary.

Research Design

Research is, “studious inquiry or examination...investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws” (Almalki, 2016, p. 289). This quantitative, quasi-experimental study examined the effects of ethnicity, gender, and participation in a retention program on retention and graduation for transfer students who had been suspended from a 4-year university. Academic suspension is a title placed on a student when the student has had below 2.0 GPA for at least two consecutive semesters. After that second semester, students are placed on suspension. Once placed on academic suspension, a student has two options: 1) enroll in the retention program that allows them to be retained for the next semester in school or 2) choose not to enroll in the retention program and sit out for a minimum of one semester and then return the following semester.

There are different types of research that researchers can use. In this study, quantitative research was used. Quantitative research uses data in number form that can be put into categories, rank order, or measured in units of measurement. It can also be used to construct tables and graphs using raw data (McLeod, 2017). To analyze the research, a binomial logistic regression, also referred to as logistic regression, was used. It “predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical” (Binomial Logistic Regression using SPSS Statistics, n.d.).

The research included transfer students who had been suspended from a 4-year university from 2014-2016. It examined the effects of ethnicity, gender, and participation in a retention program (independent variables) on retention and graduation (dependent variables). The main purpose of the study was to assess if retention and graduation are or are not dependent on participation in a retention program. The variables were entered into a logistic regression to predict the probability of a male, URM graduating by being a participant in the retention program.

Research Questions

1. What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?
2. What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?

Research Site

The site of this study was a 4-year public land grant institution located in the southern region of the United States. The institution is a comprehensive, doctoral degree granting university specializing in teaching, research, and service with a mission focused on leadership and diversity. This institution was chosen because of the researcher's employment there, convenience, its focus on recruiting transfer students, and its implementation of a retention program in 2005.

This past fall 2019, there were 17,241 undergraduate students on the main campus; 4,743 (27.5%) were transfer students. Of the 9,602 upper division students, 3,909 (40.7%) were transfer students. The retention rate for undergraduates was 79.8% with a 6-year graduation rate of 58.4%. The demographic characteristics by gender included 49% male and 48.7% female. The minority population for the institution was 27%, and Caucasians were the majority at 73%. African Americans made up 16.7% of the student population (Office of Institutional Research & Effectiveness [OIRE], 2019).

Participants

The participants in this study included male and female URM students and male transfer students enrolled at a 4-year public land grant institution in the southern region of the United States who met the criteria of being placed on academic suspension and having a GPA below 2.0 from 2014-2016. The study was particularly interested in the retention and graduation of URM and male students. Males have a higher rate of academic difficulties and lower graduation rates compared to females (Swanson, Vaughan & Wilkinson, 2015). Retention rates for URM has the

greatest gap with a 20-point difference when compared to nonminority peers (Patterson Silver Wolf et al., 2019).

Two cohorts were examined: Group 1 included transfer students placed on suspension who enrolled in a retention program between the fall semester of 2014 and 2016. Group 2 included transfer students placed on academic suspension between the fall semester of 2014 and 2016 who did not participate in a retention program. The OIRE pulled the students from raw data in Banner, a system that tracks a student's information.

All characteristics of participants and non-participants in a retention program were matched: academic standing classified as academic suspension, GPA below 2.0, and classification as a transfer student. Data from three years of retention program participants were compared to data from three years of non-participants. The independent variables were enrollment in a retention program, ethnicity, and gender and the two dependent variables were retention and graduation.

Participants who enrolled in a retention program received services that would encourage growth in their academics. First, transfer students were required to enroll in a course designed to instill skills needed for academic success. This course is a 3-credit hour bearing course that covers study skills, notetaking skills, time management, and communication, which are all good attributes to have for being retained each year and progress toward graduation. The course is intended to increase a student's GPA to good academic standing. Second, participants of the program were required to meet with their advisor and the program coordinator three times a semester. This allows them to gain a rapport with their advisor that can encourage better study habits. Meeting with the program coordinator allows for participants' accountability of being enrolled in the program. This will encourage a change in student behaviors and lead to better

academic outcomes. Third, by being enrolled in the program, participants could remain in school instead of having to sit out a semester. This will increase retention and bring participants on a path for graduation.

Data Collection Procedures

Prior to beginning data collection, the researcher gained permission from the university's Institutional Review Board (see Appendix A). The researcher then gained permission from the OIRE. The OIRE pulled raw data of students from Banner with the researcher giving the parameters of students who were transfer students and had been suspended from 2014 to 2016. The OIRE also provided the following information for each student: ethnicity, gender, whether or not student participated in retention program, retention, and graduation. Transfer students placed on academic suspension had noted on their academic standing status as suspended and in their records if they chose to enroll in a retention program. Students who chose to sit out a semester had their academic standing status remain as suspended until they return. This was noted on the student's BANNER account, available through the institution's provided software.

Procedures for Data Analysis

Data collected were analyzed by IBM Statistical Package for the Social Sciences (SPSS) using logistic regression. The use of logistic regression has grown in the social sciences and in educational research specifically in higher education (Peng, Lee, & Ingersoll, 2002). Therefore, each research question was examined using a binomial logistic regression. "A binomial logistic regression (often referred to simply as logistic regression), predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical" (Binomial Logistic

Regression using SPSS Statistics, para. 1). It is appropriate for explaining and testing hypotheses about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables (Peng et al., 2002). Peng and So (2002) suggest that, “binominal regression does not require that data are taken from multivariate normal distribution with the same variance and covariance for all variables, which makes it less restrictive than linear discriminant function analysis for modeling categorical outcomes” (p.32). It is a more practical method to linear discriminant function (Tabachnick & Fidell, 2001). Although logistic regression is easy to apply in statistical software there is some confusion over the terms, concepts, and modeling approaches. A recent examination of 52 articles, published between 1988 and 1999 in higher education journals, discovered absence of standards in the practice and reporting of logistic regression (Peng & So, 2002). “Inconsistency was found in the ratio of observation to predictors, modeling approaches, assessment of regression models, examinations of interactions among predictors and presentations of results” (Peng & So, 2002, p. 32).

Ways to evaluate the logistic regression model is looking at the soundness of the model. The soundness of the logistic regression model answer these questions (a) overall model evaluation, (b) statistical tests of individual predictors, (c) goodness-of-fit statistics, and (d) validations of predicted probabilities (Peng et al., 2002). The overall model evaluation offer a better fit to data if it shows an improvement over the intercept-only model (also called the null model). The intercept-only model works as a good starting point because it includes no predictors. Therefore, according to this model, all reflections would be calculated to belong in the greatest out-come category (Peng et al., 2002). “Statistical tests of individual predictors. The statistical significance of individual regression coefficients is tested using the Wald chi-square statistic. The test of the intercept merely suggests whether an intercept should be included in the

model. Goodness-of-fit statistics” (Peng et al., 2002, p. 6). Goodness-of-fit statistics evaluate the fit of a logistic model versus tangible results (Peng et al., 2002). The inferential goodness-of-fit test is the Hosmer–Lemeshow (H–L) test (Peng et al., 2002). The validation of predicated probabilities can be revalidated with the actual outcome to decide if high probabilities are actually linked with events and low probabilities with non-events (Peng et al., 2002).

Research question one focuses on the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university. Research question two focuses on the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university (See Table 1).

Chapter Summary

This chapter described the method to be used to analyze the research questions. Participants included transfer students placed on academic suspension at a 4-year public land grant institution in the southern region of the United States where each student had an opportunity to participate in a retention program. Data obtained to answer the research questions were analyzed using a binomial logistic regression to determine if retention and graduation are or are not dependent on program participation.

CHAPTER IV

RESULTS AND DISCUSSION

A binary logistic regression model was used to investigate the effects of ethnicity, gender, and participation in a retention program on retention and graduation for transfer students who had been suspended from a 4-year university. The following chapter will present a description of the results of the binary logistic regressions. The current study answers the following questions:

1. What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?
2. What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?

Analysis of the Data

A total of 295 participants were included in the study. Of the 295 participants, 234 (79.3%) were males and 61 (20.7%) were females. All the females were URM as presented in Table 2.

Table 2

Distribution and Percentage of Gender

	<i>N</i>	%
F	61	20.7%
M	234	79.3%

A descriptive analysis was conducted to identify each participant’s ethnicity. White males made up the largest ethnicity with 154 (52.2%) participants while Black was the second largest group with 120 (40.7%), with 59 males and 61 females. Hispanics were next with 10 (3.4%) with 4 males and 6 females, Multiracial 7 (2.4%) with 6 males and 1 female, Unknown 3 (1.0%) 2 male and 1 female, and American Indian 1 male (.3%). Results are presented in Table 3.

Table 3

Distribution and Percentage of Ethnicity

	<i>N</i>	%
Am Indian Or Alaskan Native	1	0.3%
Black Or African American	120	40.7%
Hispanic	10	3.4%
Multiracial	7	2.4%
Unknown	3	1.0%
White	154	52.2%

Next, 119 (40.3%) participants chose to enroll in the retention program, and 176 (59.7%) chose not to participate in the program. There were 67 white males who enrolled in the retention program and 87 who did not enroll. There were 28 black males and 18 female participants who

enrolled in the program and 74 black males who did not enroll in the program. All black females were enrolled in the retention program. There were 1 male and 3 female Hispanics enrolled in the retention program and 3 males and 3 female Hispanics who did not enroll in program. Results are presented in Table 4.

Table 4

Distribution and Percentage of Participants of SSP

	<i>N</i>	%
Not Enrolled	176	59.7%
Enrolled	119	40.3%

Details of the Analysis and Results

The researcher used two logistic regression analyses in the statistical analysis.

Binary Logistic Regression Analysis 1

What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?

A binary logistic regression was performed to predict retention when it relates to ethnicity, gender, and participation of the retention program. The simultaneous test of the predictor variables was statistically significant ($p = .045$), and results are presented in Table 5.

Table 5

Regression 1: Omnibus Tests of Model Coefficients

		Chi-square	<i>df</i>	Sig.
Step 1	Step	14.369	7	.045
	Block	14.369	7	.045
	Model	14.369	7	.045

The goodness-of-fit for the model with retention predictor, which is a measure of the fit of a model against actual outcomes, was assessed with the Hosmer and Lemeshow test. The results produced a chi-square of 1.647 and was not statistically significant ($p = .800$), indicating the model is consistent, as presented in Table 6.

Table 6

Regression 1: Hosmer and Lemeshow Test

Step	Chi-square	<i>df</i>	Sig.
1	1.647	4	.800

Nagelkerke's R^2 is a statistic used to report the overall explanatory power in binary logistic regression (Warner, 2008). Nagelkerke's R^2 shows how well the model predicts the dependent variable score. The higher the value between 0 and 1, the better the fit of the model. The results of the Nagelkerke's R^2 shows a weak relationship (.0108) between the predictors (ethnicity, program participation, and gender) and dependent variable (retention) as presented in Table 7.

Table 7

Regression 1: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	156.855 ^a	.048	.108

Classification tables, which display the overall percentage of cases predicted with the predictor variables were greater than without the predictor variables. The results indicated that 91.5% of the overall cases were accurately classified with the predictor variables. Sensitivity and specificity were used to evaluate the accuracy of a test that predicts dichotomous outcomes. Sensitivity refers to the proportion of the true positive or the cases correctly identified by the test as meeting a certain condition. In this model, the proportion participants that were retained the first year was 0.0%. The specificity, the proportion of true negative or the cases correctly identified by the test as not meeting a certain condition, which in this model was the proportion of participants who were retained the first year, was 100.0%. Therefore, the selected demographic variables did not add to the classification of participants as either having been or not having been retained the first year after being suspended as shown in Table 8.

Table 8

Regression 1: Classification Table

Observed		Predicted		
		Retention 1st Year		Percentage Correct
		N	Y	
Retention 1st Year	N	0	25	.0
	Y	0	270	100.0
Overall Percentage				91.5

To assess the effect of each of the individual predictors, the Wald Chi-square statistic, which is a measure of statistical significance of individual regression coefficients, was examined. For variables found to be statistically significant, the odds ratio, a measure of effect size, is reported. An odds ratio above 1 indicates increased odds of an event, in this case predicting the occurrence of a retained or not retained, whereas an odds ratio below 1 indicates decreased odds of an event.

The variable ethnicity was not found to be a significant predictor of being retained the first year after suspension ($p = .710$). Gender (male) was not found to be a significant predictor of retention after the first year of being suspended ($p = .607$). Program participation was found to be a significant predictor for retention after the first year of being suspended ($p = .017$) as shown in Table 9.

Table 9

Regression 1: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Gender(1)	-.284	.553	.264	1	.607	.753	.255	2.225
	Ethn			2.934	5	.710			
	Ethn(1)	18.822	40192.969	.000	1	1.000	149444708.751	.000	.
	Ethn(2)	-.584	.532	1.205	1	.272	.558	.197	1.582
	Ethn(3)	18.709	12478.930	.000	1	.999	133467462.486	.000	.
	Ethn(4)	-.955	1.165	.672	1	.412	.385	.039	3.776
	Ethn(5)	-1.947	1.345	2.095	1	.148	.143	.010	1.993
	SSP	1.348	.564	5.711	1	.017	3.850	1.274	11.632
	Constant	2.380	.361	43.425	1	.000	10.810		

a. Variable(s) entered on step 1: Gender, Ethn, SSP.

Binary Logistic Regression Analysis 2

What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?

A binary logistic regression analysis was performed to predict graduation when it relates to ethnicity, gender, and participation in a retention program. The simultaneous test of the predictor variables for this model was statistically significant ($p = .000$) as presented in Table 10.

Table 10

Regression 2: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	28.225	7	.000
	Block	28.225	7	.000
	Model	28.225	7	.000

The goodness-of-fit for the model with graduation predictor, which is a measure of the fit of a model against actual outcomes, was assessed with the Hosmer-Lemeshow test. The results produced a chi-square of 1.164 and was not statistically significant ($p = .948$), indicating the model is consistent, as presented in Table 11.

Table 11

Regression 2: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	1.164	5	.948

The results of the Nagelkerke's R^2 demonstrated a weak relationship (.144) between the predictors of graduation and the dependent variables as presented in Table 12.

Table 12

Regression 2: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	269.764 ^a	.091	.144

The classification table shows 79.7% of the overall cases are accurately classified with the predictor variables. Sensitivity and specificity were used to evaluate the accuracy of a test that predicts dichotomous outcomes. The sensitivity in this model for the proportion of non-graduates was 100%. The specificity in this model for the proportion of participants who did graduate was 0.0% as indicated in Table 13.

Table 13

Regression 2: Classification Table

Observed		Predicted		
		Graduation		Percentage Correct
		0	1	
Step 0	Graduation 0	235	0	100.0
	1	60	0	.0
Overall Percentage				79.7

- a. Constant is included in the model.
- b. The cut value is .500

Among the independent variables, gender (male) and ethnicity were not found to be significant predictors of graduation. Program participation was found to be a statistically significant predictor to graduating ($p = .000$). There were 40 participants that enrolled in the retention program that graduated and 20 participants that graduated who did not participate in retention program. Within those 40 graduates, there were 25 white males, 7 black males, 7 black females, and 1 Hispanic female. Within the 20 graduates that did not participate in the retention program, 10 were white males, 5 were black male, 4 were black female, and 1 Hispanic female. Therefore, a participant who enrolled in the retention program was more likely to graduate than a participant who chose not to enroll as shown in Table 14.

Table 14

Regression 2: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Gender(1)	.385	.474	.661	1	.416	1.470	.581	3.722
	Ethn			1.550	5	.907			
	Ethn(1)	-19.300	40192.970	.000	1	1.000	.000	.000	.
	Ethn(2)	-.379	.385	.969	1	.325	.685	.322	1.455
	Ethn(3)	-1.133	1.147	.976	1	.323	.322	.034	3.049
	Ethn(4)	-20.089	14721.287	.000	1	.999	.000	.000	.
	Ethn(5)	-20.012	22594.278	.000	1	.999	.000	.000	.
	SSP	1.381	.310	19.829	1	.000	3.980	2.167	7.310
	Constant	-1.903	.274	48.276	1	.000	.149		

a. Variable(s) entered on step 1: Gender, Ethn, SSP.

Summary

This study examined the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who had been suspended from a 4-year university. This study showed that regardless of the URM, ethnicity was not significant and therefore had no effect on retention for students who enrolled in a retention program. Another independent variable, males, made up a large majority of this study with 234 participants or 79.3% of the participants. Results showed no significant difference in males being retained their first year after being placed on academic suspension. The retention program that students enrolled in or not showed a significant difference, meaning students were 1.3 times more likely to be retained if they enrolled in the retention program.

While retention is an important fact that shows students are being retained, graduation is the successful completion of college. This study also examined the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who had been

suspended from a 4-year university. Results showed that the retention program was a positive predictor of students graduating. So, if participants were placed on suspension and chose to enroll in the retention program, they were more likely to graduate 1.4 times more than those who chose not to enroll in the program. Independent variables ethnicity and male had no effect on whether or not students graduated.

CHAPTER V

SUMMARY, LIMITATIONS, AND FUTURE RESEARCH

This chapter contains a discussion of the results of the binary logistic regression conducted by the researcher. The study examined the effects of ethnicity, gender, and participation in a retention program on retention and graduation for transfer students who had been suspended from a 4-year university. This chapter includes a summary of the study, limitations, and implications of practice and future research. The research questions were the following:

1. What are the effects of ethnicity, gender, and participation in a retention program on retention for transfer students who have been suspended from a 4-year university?
2. What are the effects of ethnicity, gender, and participation in a retention program on graduation for transfer students who have been suspended from a 4-year university?

As presented in Chapter IV, the researcher found that neither the demographic characteristic gender nor the demographic characteristic ethnicity had an effect on retention or graduation. However, the retention program was shown to have a significant effect, meaning students who participated in the retention program were more likely to graduate than those who chose not to participate. The demographic male was found to have no effect on graduation when enrolled in a retention program. The conclusion is that the logistic regression model was a poor predictor on retention, with less than 5% of the study having an effect on retention. The logistic

regression model for graduation showed less than a 10% predictor for graduation due to the retention program being the only predictor of a significant difference for graduation.

The following conclusions were made.

Conclusion 1: Ethnicity had no effect on retention for transfer students who have been suspended from a 4-year university. These results do not agree with prior research on ethnicity and retention. URM students have had a retention gap of 20 points when compared to nonminority peers (Patterson Silver Wolf et al., 2019). This study showed a poor predictor to ethnicity and retention, therefore, may be the reason for this result. While the results of this study do not reflect retention being affected by ethnicity, it is important to point out that URM transfer students have challenges that can affect their progress. Working long hours, having dependents, and financial problems may cause a disruption in their academics and can cause them to stay in school longer than needed. After being suspension, the likelihood is that their financial aid is also place on suspension, which prevents them from having the financial resources to continue school even if they wanted to enroll in the retention program. With all the challenges that URM transfer students encounter, enrolling in a retention program can greatly benefit their academic progress and keep them in school.

Conclusion 2: Gender had no effect on retention for transfer students who have been suspended from a 4-year university. These results do not agree with prior research. Prior research suggest that males have a higher rate of academic difficulties which may can lead to not being retained (Swanson et al., 2017). This outcome may be due to this study being a poor predictor on gender and retention. While being male had no effect on the retention, the importance of the struggles of males remain a problem for higher education administrators. Transfer males come to universities

tend to have difficulties reading class materials and using good time management. With the current trend of less males being retained and graduated, a retention program would help bridge the gap and allow males a chance to thrive and succeed in college.

Conclusion 3: Participation in a retention program had a positive effect on retention for transfer students who have been suspended from a 4-year university. These results agree with prior research that a retention program can be beneficial to academic success. According to Engle, Reilly and Levine (2004), students who participated in a retention program showed their academic progress improved, with 69% of students obtaining a 2.0 or higher while enrolled in the program versus 43% for those that did not enroll. The emphasis on notetaking, study skills and time management may have contributed to the positive effect. Retentions programs also have been known to improve academic performance by providing more structure, face to face advising, biweekly check ins, and goal setting. These quality interventions have allowed transfer students that participated in a retention program long lasting skills that will help keep them retained and progress toward graduation.

Conclusion 4: Ethnicity had no effect on graduation for transfer students who have been suspended from a 4-year university. These results do not agree with prior research. Prior research showed that URM, especially black students, graduate at a slower rate (Mooring & Mooring, 2015). These results may be due to this study having less than 10% predictor for graduation. Often transfer students tend to be minorities, the effects of a retention program for them can be beneficial. Transfer students tend to come with less academic skills and have other responsibilities other than just school. Also, most transfer students have a lower socioeconomic

status and being placed on suspension can alter their financial resources to the point where going to school may be put on hold especially if financial aid has been taken away which can keep them from enrolling in a retention program. Retention programs can help keep those students from sitting out and allow them to gain the necessary skills to progress towards graduation.

Conclusion 5: Gender had no effect on graduation for transfer students who have been suspended from a 4-year university. These results do not agree with prior research on male graduation. Pike, Hanson and Childress (2014) suggested that males have a lower likelihood of graduation. The results to this study are due to having a low percentage predictor of graduation. While this study did not show males having an effect on graduation, retention can still be helpful with this population. Studies such as Spruill, Hirt and Mo (2015) show that males are earning less degrees than women among reasons such as laziness and poor planning. Enrolling in a retention program can help increase males' academics and can produce more male college graduates.

Conclusion 6: Participation in a retention program had a positive effect on graduation for transfer students who have been suspended from a 4-year university. These results agree with prior research on graduation. Participants who were enrolled in a retention program showed increased GPA and were more likely to graduate if enrolled in a retention program than not being enrolled (Thomas et al., 2018). Retention programs can be even more successful if more students are able to enroll in them. While some financial barriers may cause some to not enroll in a retention program, for those that do enroll, they are likely to gain skills that will allow them to be successful.

Limitations of the Study

In the case of this study, the sample size was moderate enough as to not to be a limitation of the study discussed by Fraenkel and Wallen (2006), who suggested having at least a sample size of 50 in correlation studies in order to establish a relationship. However, there were limitations involved with this study including the following.

- The researcher assumed participants in the retention program gave appropriate effort to complete the requirements of the retention program.
- The researcher assumed the characteristics of the participants in this study were representative of suspended transfer students in prior years.
- Students who are in this program choose to do so (often by paying for it out-of-pocket) so you would expect them to be more motivated to succeed as compared to a program where students were required to enroll.

All of the above factors could possibly affect the internal validity of the study. Fraenkel and Wallen (2006) suggested standardizing the conditions under which the study occurs, obtaining more information on the subjects of the study, obtaining more information on the details of the study, and choosing the appropriate design. Any or all of these alternatives can minimize threats to internal validity.

Recommendations for Practitioner and Policy Makers

Recommendations for practitioners and policymakers may benefit administrators who oversee retentions programs as well as students, faculty, and advisors. The results of this study can help show students the benefits of retention programs where they can receive the tools needed to stay and to graduate. Similarly, administrators, faculty and advisors could be made

aware of students' increased chance of success by enrolling in a retention program as opposed to sitting out a semester.

Recommendations for Future Research

After conducting this research study, the researcher would make the following suggestions for further research by future researchers:

1. Examine current programs of study for transfer students placed on academic suspension to see if a student's major has an impact on retention and graduation.
2. Expand the length of the study to see if similar results are produced.
3. Use a qualitative study to see why students choose not to enroll in a retention program.
4. Examine if account holds and financial aid status may prevent a student from being in school.
5. Expand the study to include all white female students.
6. Provide retention program as a service to students that enroll in program instead of charging tuition to help benefit the University's mission to increase retention.

Summary

Chapter V summarized the findings of this research study and presented a discussion of the conclusions based upon the result of the retention program being a good predictor of students being retained and graduating after being placed on academic suspension. A discussion of the results of being male or URM having no effect on retention or graduation was also provided. Limitations were discussed as were recommendations for practitioners and policymakers as well

as administrators, students, and advisors. In addition, a discussion of how the results of this study may provide insight into future research was provided.

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APPENDIX A
IRB APPROVAL FORM

Protocol ID: IRB-20-181
Review Type: EXEMPT
Principal Investigator: Stephanie King

You are receiving this inactivation notification for one of the two following reasons:

1) Exempt Determinations:

This protocol is has been granted an exemption determination. Based on this exemption, and in accordance with Federal Regulations which can also be found in the MSU HRPP Operations Manual, your research does not require further oversight by the HRPP.

Therefore, this study has been inactivated in our system. This means that recruitment, enrollment, data collection, and/or data analysis can continue, yet personnel and procedural amendments to this study are no longer required. If at any point, however, the risk to participants increases, you must contact the HRPP immediately.

2) Non-Exempt Approvals (Expedited or Full Board):

A request to inactivate (with the submission of a final report) your non-Exempt protocol was submitted and approved. If this is the case, there should be no further data collection or data analysis conducted under this protocol.

For additional questions pertaining to this study, please contact the HRPP at irb@research.msstate.edu