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Collegiate Academic Enhancement Programs: The Benefits of Multi-Year Programs Compared to the Benefits of One-Year Programs for Traditionally Underrepresented Students

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ABSTRACT

Collegiate Academic Enhancement Programs:

The Benefits of Multi-Year Programs Compared to the Benefits of One-Year Programs for

Traditionally Underrepresented Students

by

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Student retention rates and graduation rates currently play a major role in measuring the success of institutions of higher education. To contribute to the likelihood of this success many institutions offer programs designed to increase the academic performance of their students especially those classified as incoming freshmen. Others are more focused and target those who are from underrepresented populations. Nonetheless not many programs have been designed to aid those students in the subsequent years that follow freshman year.

The purpose of this research project was to determine if there are significant differences in the success of those students who participate in a multi-year program as opposed to those who participate in a program specifically designed for incoming freshmen. Additionally these 2 groups were compared with students who did not participate in either program.

The participants in this study were classified within 3 groups: Quest for Success, Student Support Services, and nonprogram participants. Archival data were used to examine grade point averages, retention rates, and graduation rates. A random sample of 125 students from each of the 3 groups (375 total) was examined for the purposes of comparing mean grade point averages. For the purposes of comparing retention rates and graduation rates, however, the population was examined due to the manner in which data were provided. Additionally the use of the population provided more precise retention rates and graduation rates in this study.

Findings of the study are congruent with the literature in terms of the role that outreach programs play in the success of underrepresented students. These results revealed that students in the multi-year program, Student Support Services, had significantly higher grade point averages, retention rates, and graduation rates when compared to Quest for Success (a 1-year incoming freshman program). Student Support Services also had significantly higher grade point averages and retention rates than nonprogram participants from underrepresented student populations. Furthermore there were no significant differences found in comparisons between Quest for Success and nonprogram participants.

DEDICATION

This work is dedicated to my amazing wife Kiana Brooks for loving, supporting, and believing in me throughout this entire process. Through your persistence and determination, you continue to motivate me on a daily basis.

To my daughter Déja, who has always been proud of me and believes that I can do anything. Thank you for allowing me to be your Superman.

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CHAPTER 1

INTRODUCTION

Having all the ingredients for chili does not mean one has chili. Something has to be done with the various ingredients just as something has to be done with certain characteristics and traits to help leaders evolve into more effective leaders in their specific areas of leadership (Chand, 2005). Although Chand is referring to leadership in this particular instance, this idea is applicable to development of any kind.

Several academic programs are designed to help nurture and enhance the academic performance of historically underrepresented college students. As more college campuses shift their attention to achieving diversity, words such as "inclusion" and "underrepresented" emerge. According to Harper (2008) inclusion must be an intentional educational practice. Harper also argues that learning is a byproduct of what happens outside of the classroom in addition to what occurs inside of the classroom. To that end, the learning environment should be a community that is both supportive and inclusive.

Outreach activities benefit the students they serve as well as the university's civic mission by providing increased college access to underrepresented students (Kiyama, Lee, & Rhoades, 2012). The authors also added that those who are classified as underrepresented are "especially vulnerable in times of economic stress" (p. 276). The basic principle behind education is the pursuit of knowledge; however, during tough economic times educational attainment becomes secondary to job attainment, especially for underrepresented students (Moore, 2009).

Many underrepresented students attend college as an alternative to joining the workforce (Moore, 2009). The university then takes on the responsibility of providing these students with the resources they need to be successful in the academic setting by way of programming. Often these outreach efforts operate with limited funding and administrative support (Kiyama et al., 2012). Because many support programs rely heavily on a small support staff and operating budget, efforts risk failure when funding is depleted or the responsible administrator leaves the institution. Unfortunately underrepresented students and the programs designed to aid these students encounter barriers that hinder their successes.

In 2007 Spellman identified several college enrollment barriers that prospective students from underrepresented populations face in pursuit of higher education and the potential for a better life. The barriers that Spellman identified can be divided into three categories: situational, institutional, and dispositional. Barriers resulting from one's circumstances in life are considered situational. Institutional barriers involve policies and practices that prevent, or make difficult, participation in activities or courses. An example of this would be the lack of financial assistance. Dispositional barriers include the students' perceptions or attitudes about their ability to succeed. Cooper (2011) also adds that "students' academic literacy practices involve a degree of self-limitation and self-censorship" (p. 46). While these barriers are a hindrance for many underrepresented students, there are those who make it through the enrollment process and are then subject to placement testing. The use of placement tests often determines whether students are ready to handle the course load of the curriculum or if additional assistance is needed to foster stronger basic skills. As a result of placement testing, developmental courses in math, English, and/or reading may be required for these students. In addition to college enrollment barriers, demographic factors also influence retention.

There are seven demographic factors that influence retention: delayed entry, part-time employment, full-time work, financial independence, dependents, single parenthood, and community college attendance without a high school diploma (Spellman, 2007). Consequently the barriers that deter students from enrolling in college are sometimes the same barriers that prevent them from remaining in degree programs until completion. In addition to these obstacles, finding time to study and complete assignments can also present major difficulties for students and may eventually lead them to academic failure. To rectify this problem Bash (2003) suggests "collaboration and harnessing the learner's own experience is a key factor in achieving transformative learning" (p. 36).

Galbraith and Jones (2003), like Bash (2003), argued that student success was essentially the responsibility of the institution itself. They proclaimed that "higher education needs to take on the responsibility of fostering creativity in learners, faculties, and administrators who can function in shifting social and cultural climates" (p. 19). Based on this belief they suggest that individuals who feel a sense of trust, openness, respect, support, and acceptance are more likely to engage in learning activities, decision-making processes, program development, as well as marketing strategies. Furthermore creativity is enhanced when organizational life and those who comprise it demonstrate that risk-taking is valued and encouraged. Galbraith and Jones defined the selection of instructors and learners from diverse backgrounds who have varying interests, learning and thinking styles, experiences, and who reflect the various stages in life cycle development as a basic necessity of enhancing creativity. Additionally by encouraging feedback, creative individuals are asked to engage in the process of praxis. The authors proposed that engaging in students' creative action and allowing time for reflection are critical components of

the learning process. While feedback is essential in the promotion of creativity, creative people must feel a sense of trust, respect, and sincerity throughout the entire process.

Group support is also another factor influencing creativity in learning experiences. The primary, overall benefit of group interaction in the promotion of creativity, as denoted by Galbraith and Jones (2003), is that it provides an environment comprised of imaginative individuals who bring with them a set of opposing viewpoints that ultimately encourages imaginative thinking and gets the 'creative juices flowing.' However because creativity is a human endeavor, accidents and mistakes are inevitable. That being the case, the authors state, "Every effort should be made to plan for accidents and mistakes, but mistakes, unplanned accidents, or failures are necessary components in the creative process as they can serve as mechanisms for further reflection and innovation" (p. 22). As cited by Galbraith and Jones (2003, p. 23), "Even Albert Einstein suggested that creativity is far more significant than knowledge in the advancement of humankind." By incorporating new ideas, a classroom becomes a place that begins to change, modify, and adapt to the possibilities that innovation is welcomed.

Williams, Berger, and McClendon (2005) provide an overview of how campuses can achieve Inclusive Excellence through comprehensive organizational change. The definition of Inclusive Excellence consists of four primary elements:

1. A focus on student intellectual and social development. Academically, it means offering the best possible course of study for the context in which the education is offered.

2. A purposeful development and utilization of organizational resources to enhance student learning. Organizationally, it means establishing an environment that challenges each student to achieve academically at high levels and each member of the campus to contribute to learning and knowledge development.

3. Attention to the cultural differences learners brings to the educational experience and that enhance the enterprise.

4. A welcoming community that engages all of its diversity in the service of student and organizational learning (p. vi).

Inclusive Excellence focuses on change related to four areas: (1) access and equity, (2) campus climate, (3) diversity in the formal and informal curriculum, and (4) learning and development. The four areas, definitions, and sample indicators of Inclusive Excellence are listed below in the Table 1.

Table 1
Inclusive Excellence Scorecard

IE Area	Definition	Sample Indicators
Access and Equity	The compositional number and success levels of historically underrepresented students, faculty, and staff in higher education	← Number of students, faculty, and staff members of color at the institution ← Number of tenured women faculty in engineering ← Number of male students in nursing ← Number of historically underrepresented students in science, technology, engineering, and mathematics (STEM) fields
Diversity in the Formal and Informal Curriculum	Diversity content in the courses, programs, and experiences across the various academic programs and in the social dimensions of the campus environment	← Courses related to intercultural, international, and multicultural topics ← Campus centers, institutes, and departments dedicated to exploring intercultural, international, and multicultural topics ← Articles, monographs, lectures, and new knowledge that is produced around issues of diversity
Campus Climate	The development of a psychological and behavioral climate supportive of all students	← Incidents of harassment based on race, ethnicity, gender, and sexual orientation ← Attitudes toward members of diverse groups ← Feelings of belonging among ethnically and racially diverse groups on campus ← Intergroup relations and behaviors on campus
Student Learning and Development	The acquisition of content knowledge about diverse groups and cultures and the development of cognitive complexity	← Acquisition of knowledge about diverse groups and cultures ← Greater cognitive and social development derived from experiences in diverse learning environments ← Enhanced sense of ethnic, racial, and cultural identity for all students

The authors (Williams et al., 2005) argued that colleges and universities should not be viewed a closed systems. Instead they should be viewed as open systems that are impacted by several outside influences of the larger organizational system such as evolving technologies, unpredictable economic markets, and changing demographics. "To create a 'culture of inclusive excellence,' higher education leaders must consider how their campus environments can adapt to meet the needs of today's highly diverse entering students, rather than beginning with the assumption that diverse students must assimilate into existing environments with relatively narrow measures of quality" (Williams et al., 2005, p. 9).

When educational inclusion, enrollment and retention barriers, and the need for a support system are considered, programming appears to be an essential component in the success of students from underrepresented populations. In recent years a variety of interventions have been developed and implemented, and through this variation several different models have been used. Some of those initiatives are designed for incoming freshmen, and others encourage students' participation throughout their college career. Because resources to support such programs are so limited, examining the benefit of these various program models could prove to be beneficial and offer a method by which to conserve these resources (Kiyama et al., 2012).

<u>Statement of the Problem</u>

Several academic programs have been designed to help enhance the academic performance of historically underrepresented college students. Out of these various programs several different models have been developed and implemented.

The purpose of this quantitative study was to determine if there are significant differences between the academic successes of multi-year program participants compared to freshman-year

program participants. Academic success was operationalized as grade point averages, retention rates, and graduation rates. Student Support Services will represent the multi-year program and Quest for Success will represent the freshman-year program. These two groups were also compared with a sample of students who do not participate in either program.

This study was an examination of the academic performance of students who have participated in the Quest for Success program and compares their performance to those students who participated in TRiO's Student Support Services. Both programs were designed to supplement the resources available to underrepresented students in an attempt to assist them in successfully completing college. The study examined students' grade point averages and programs' retention rates and graduation rates.

Research Questions

Through quantitative analyses, the grade point averages, retention rates, and graduation rates of Quest for Success and Student Support Services participants at East Tennessee State University were examined, compared, and cross-referenced with those nonprogram participants using archival data from the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011 – 2012 school years. The following research questions were employed as part of the quantitative research serving as the focus of the investigation:

1. Is there a significant difference in the grade point averages of those underrepresented students who participate in the Quest for Success Program, TRiO's Student Support Services, and nonprogram participants?

2. Is there a significant difference between the high school grade point averages and college grade point averages?

3. Do the differences in college grade point averages among the three programs vary significantly as a function of high school grade point averages?

4. Do the differences in college grade point averages among the three programs vary significantly as a function of gender?

5. Is there a significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs?

6. Is there a significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs?

Significance of the Study

Student retention rates and graduation rates currently play a major role in measuring the success of institutions of higher education. To contribute to the likelihood of this success many institutions offer programs design to increase the academic performance of their students especially those classified as incoming freshmen (Kiyama et al., 2012). Other programs are most focused and target those from underrepresented populations. Programs for underrepresented students are implemented as a result of the barriers they encounter in their attempt to gain access to education. Ness and Tucker (2008) claimed that the socioeconomic status and race or ethnicities of students are identified as the most common barriers to college access. While much has been done to aid underrepresented students in gaining access, not many programs have been designed to aid those students in subsequent years that follow freshman year.

Kiyama et al. (2012) discussed the limited resources available to academic departments or colleges for the purposes of initiating their own programs. The resource limitations include

administrative staff support in addition to budgetary limitations. In other words many of these efforts tend to fail once funding has depleted or the responsible staff person leaves the institution.

The results of this study could be used to help departments, colleges, and universities preserve their resources by eliminating the duplication of services offered through programming. Furthermore by implementing more collaborative efforts in regards to programming, this study could help create relationships between departments and colleges or even the university at-large.

Rationale

The Quest for Success program was created in 2006 at East Tennessee State University. The program was developed to help historically underrepresented students become acclimated to life on ETSU's campus. To accomplish this, the program focuses on the critical role that networking plays in student success giving them a head start on developing a network of friends, faculty, and staff to assist them through their college journey.

Like the Quest for Success program, Student Support Services was developed to assist underrepresented students as well. The primary focus of the program is to help students from underrepresented populations stay in college until they earn their baccalaureate degrees. Free tutoring, career and personal counseling, academic advising, mentoring, and college survival skills are offered to all program participates. These resources offered by Student Support Services specifically target those students who are from low-income or first generation backgrounds or are minority students (Division of Academic Affairs at East Tennessee State University, 2012).

This particular study focused primarily on the perceived impact that outreach programs can have on student learning and students' academic success. The programs were purposefully

selected because of their targeted demographic group. Students chosen for these programs had

previously been identified as being underrepresented therefore to remain objective, students

examined for the purposes of this study have self-identified as being a member of an

underrepresented population.

Definitions of Terms

For the purposes of this particular research study, the following definitions were

provided.

1. *Grade point average:* calculated by taking the sum the students' individual class points

   earned and dividing by the total number of credit hours attempted (Back to College,

   2012). Class points earned are assigned as follows: A = 4.00 grade points; A- = 3.70

   grade points; B+ = 3.33 grade points; B = 3.00 grade points; B- = 2.70 grade points; C+ =

   2.30 grade points; C = 2.00 grade points; C- = 1.70 grade points; D+ = 1.30 grade points;

   D = 1.00 grade points; D- = 0.70 grade points; F = 0.00 grade points. Students' grade

   point averages are often used to determine student progress and failure standards. For the

   purposes of this study, student's grade point averages will be examined at the end of the

   freshman year.

2. *Outreach Program:* Program whose efforts increase the availability and use of services

   especially through direct intervention and interaction with a target population (Glossary

   of Education, 2012).

3. *Quest for Success Program:* A college transition program designed to help first-year,

   historically underrepresented students become acclimated to East Tennessee State

University's campus life while building a network of friends, faculty, and staff to assist them through their college journey (ETSU Office of Equity & Diversity, 2012).

4. *Retention Rate:* The rate at which students persist in their educational program at an institution, usually expressed as a percentage (Integrated Postsecondary Education Data System, 2012). For the purposes of this study, retention rates will be calculated between freshman year to sophomore year.

5. *Socioeconomic Status (SES):* The social standing or class of an individual or group. It is often measured as a combination of education, income, and occupation. Examinations of socioeconomic status often reveal inequities in access to resources, plus issues related to privilege, power, and control (American Psychological Association, 2012).

6. *Student Support Services:* One of the federally funded TRiO program that offers free tutoring as well as other types of academic support to students who qualify for the program. Students who are low-income individuals, first-generation college students, or individuals with disabilities qualify for this program (Division of Academic Affairs at East Tennessee State University, 2012).

7. *TRiO Programs:* Federal outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. TRiO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to post-baccalaureate programs (U.S. Department of Education, 2011).

8. *Underrepresented*: To be inadequately represented (Merriam-Webster, 2012). The Office of Equity & Diversity at East Tennessee State University defines the term using but not limited to racial-ethnic minorities, the economically disadvantaged, or persons with

disabilities. For the purposes of this study, underrepresented will be defined as those racial-ethnic minorities, the economically disadvantaged, or persons with disabilities who are inadequately represented on the campus of East Tennessee State University.

<div align="center">Limitations and Delimitations</div>

This study is limited to subjects who are or who were students of East Tennessee State University located Johnson City, Tennessee. For the purposes of this study students entering in fall of 2007 through fall of 2012 were the focus. This study may not be generalized to any other population. Additional student outcomes may have been directly or indirectly affected by other factors not included as variables in this study.

Another limitation of the study is the use of grade point averages. Although frequently used as a measure of success, research suggests that there is little variance in grade point averages and its ability to make predictions about academic success beyond freshman year.

Grade point averages, retention rates, graduation rates are all cognitive variables. Because the study is limited to these cognitive variables of student success, this serves as a delimitation of the study. Other noncognitive variables such as student satisfaction, offices held within organizations, goals, or self-efficacy were not examined in this study. Research does show a correlation between noncognitive variables and student success especially for historically underrepresented students (Tracey & Sedlacek, 1985, 1987, 1994).

The next limitation of this study is my role as an administrator on campus. I have been employed by East Tennessee State University since July of 2010 in the Office of Equity and Diversity. As a member of a committee that monitors the performance of the underrepresented

students, I had no direct access to any student data. I did, however, become familiar with the services offered by the institution to aid underrepresented students.

Overall the subjects of the study represent varying demographic backgrounds. Observations for all program participants were recorded and analyzed using archival data. Archival data regarding grade point averages, retention rates, and graduation rates come from the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011 – 2012 academic years. It is common to use a 6-year graduation rate; however, due to limited data for years dating before 2008 graduation rates are based on 4 years for this study.

Overview of the Study

Chapter 1 provides an introduction to the study, a statement of the problem, research questions, the significance of the study, definitions of terms used in the study, and limitations.

Chapter 2 provides a review of the literature on affirmative action in higher education. Furthermore the chapter presents pertinent information concerning the historical background of underrepresented students in higher education and the role that outreach programs play in the higher education setting.

Chapter 3 presents the statistical methods and techniques used to assess the successes of the Quest for Success program and TRiO's Student Support Services.

Chapter 4 includes the statistical outcomes of the quantitative analyses of the data collected from archival data within the university's database.

Chapter 5 provides a summary of the findings, conclusions, and recommendations for further research and recommendations for practice.

CHAPTER 2

REVIEW OF LITERATURE

Underrepresented Students and Affirmative Action

According to Admissions 360 (2012) underrepresented minorities include African-Americans, Hispanics, and Native Americans. The Office of Equity and Diversity at East Tennessee State University, however, defines underrepresented in relationship to individuals' racial-ethnic identification, (disadvantaged) economic status, or persons with disabilities (ETSU Office of Equity & Diversity, 2012). Underrepresented students are becoming desirable to schools due to an increased effort to push campus diversity and affirmative action (Admissions 360, 2012; Kiyama et al., 2012).

East Tennessee State University's Strategic Diversity Plan (2011) states the following in regards to diversity.

> Diversity can be broadly defined as differences. When applied within the context of education and the educational community, diversity represents the inclusion and support of groups of people with a variety of human characteristics that go beyond the legally protected classes of race, sex, age, religion, national origin, disability status, veteran status, to include, but not be limited to, other categories such as socio-economic status, sexual orientation, first generation college status, urban or rural upbringing and other personal characteristics that shape an individual's identity and life experience in a substantive way. (para. 2)

Due to an increasing number of conflicting lower court decisions on affirmative action within the past 2 decades, the Supreme Court began to engage in the issue of whether race-conscious admissions policies should be permissible on American college campuses. Prior to this the Supreme Court had not presented an opinion on affirmative action in higher education since its ruling in the 1978 *Bakke* case that dealt with reverse discrimination. During this case the court decided that a university could take race into account as a factor in admissions, financial aid, and

faculty employment in order to achieve diversity on campus (Bonnell, 2001; University of California Regents v. Bakke, 1978).

According to Bonnell (2001) that landmark ruling has formed the basis for affirmative action policies in schools throughout the United States. Nevertheless the *Bakke* decision also help fuel multiple lawsuits challenging affirmative action, with conflicting decisions by lower courts, leaving colleges and universities more confused than ever about which elements are permissible in admissions.

The Bakke decision in *Regents of University of California v. Bakke, 438 U.S. 265* (1978) was an attempt to implement diversity as a compelling state interest in an effort undo past ruins of discrimination and increase the number of underrepresented minorities in colleges and universities. The University of California Medical School at Davis reserved 16 of the 100 places in each year's class for minority students. As a result of these policies, there was confusion over the legality of quotas and affirmative action. Allen Bakke, who was white, was denied admissions by the university twice, took the matter to the state court claiming that his civil rights had been violated under both the *Fourteenth Amendment and Title IV of the 1964 Civil Rights Act*, 42 U.S.C. § 2000d. A California Superior Court ruled in Bakke's favor on both grounds and also supported Bakke's right to be admitted solely on the basis of the *Fourteenth Amendment* that guaranteed equal protection of the law to all citizens. *Title IV* held that no person can be discriminated against because of race, color, or national origin under any federally-funded program or institution. The United States Supreme Court declared that, "preferring members of one group for no reason other than race or ethnic origin is discrimination for its own sake" (Nichols, Ferguson, & Fisher, 2005, p. 23).

The Supreme Court ruled that the attainment of a diverse student body was a goal for an institution of higher learning. According to the court the attainment of a diverse study body should not be acquired through a quota system based on race or ethnicity. Justice Powell asserted that colleges and universities can, however, contribute to educational pluralism by considering race in relationship to the perspective students' talents, service, maturity, and history or overcoming disadvantage (Nichols et al., 2005).

In August of 2002 the federal appeals court in Atlanta ruled against affirmative action by ruling that the University of Georgia's admissions method was unconstitutional. The court specifically objected to Georgia's policy (*Johnson v. Board of Regents of the University of Georgia, Nos. 00-14340, 00-14382,* 2001) of awarding minority applicants bonus points that elevated them above nonminority candidates in the admissions competition.

Variations of this method were widely used throughout the United States, but uncertainty over their legality had caused a great deal of confusion for admissions officials of larger public schools who were receiving an increased number of applications from high school graduates, including applications from minority students. To help with the analysis of their numerous applicants, many of the larger schools use quantitative formulas, factoring in race or ethnic background to help ensure minority representation on campus. The more holistic approach taken by smaller, private schools includes evaluating applicants based on personal essays, interviews and recommendations, which are not so vulnerable to court challenges (Bonnell, 2001).

Some states, notably Texas, Florida, and California, have outlawed race-based admissions. Instead they use variations of a system that guarantees admission to the top graduates of every high school in the state. Background on these 3 plans is listed below according to Nichols et al. (2005).

Texas Percent Plan

In 1992, four white students, Cheryl Hopwood, Douglas Carvell, Kenneth Elliot, and David Rogers, applied for admission to the University of Texas Law School and were denied admission. The applicants argued that the law school's affirmative action admission policy violated equal protection. The United States District Court for the Western District of Texas, 861 F. Supp 551 (year) ruled in favor of the applicants. The Court of Appeals held that the state university law school's admission policy discriminated in favor of minority applicants by giving substantial racial preferences in its admission policy in violation of equal protection (Hopwood v. Texas, 78 F, 3rd 932) (1996). The state of Texas's appeal to the United States Supreme Court was denied and the judgment of the United States Court of Appeals decision was that the admission policy did in fact discriminate in favor of minority applicants.

The students argued that the admission policies violated their Fourteenth Amendment right to equal protection (Hopwood v. Texas). The admission policy allowed African-American and Mexican-American students to be admitted with lower GPA and LSAT scores. The Fifth Circuit Court of Appeals in 1996 prohibited race-conscious admission policies at the law school. The Court of Appeals wrote:

> "Within the general principles of the Fourteenth Amendment, the use of race in admission for diversity in higher education contradicts, rather than furthers, the aims of equal protection. Diversity fosters, rather than minimizes, the use of race. It treats minorities as a group, rather than as individuals. It may further remedial purposes but, just as likely, may promote improper racial stereotypes, thus fueling racial hostility. The use of race, in and of itself, to choose students simply achieves a student body that looks different. Such a criterion is no more rational on its own terms than would be choices based upon the physical size or blood type of applicants" (Hopwood v. Texas).

The Court of Appeals' decision ended the university's race-conscious affirmative action plan and created a concern about enrollment and graduation rates of African-American and Mexican-American student admission at the University of Texas. A task force made up of faculty members associated with the Center for Mexican American Studies at the University of Texas, others from the University of Houston and the Mexican American Legal Defense and Educational Fund was established in response to a request from Senator Gonzalo Barrientos. The charge of the task force was to analyze the implications of the Hopwood decision and to generate alternatives that could become legislation.

The recommendation of the task force was to draft a bill that included the automatic admission of each student in the top 10 percent of accredited public or private high schools as first-time freshman to public institutions. Universities had the option to extend the automatic admission threshold to the top 25 percent. In addition, universities had a list of 18 other factors that could be considered in admission (House Bill 588).

California Percent Plan

California was beginning plans to end the consideration of race/ethnicity in admission decisions around the time of the Hopwood ruling. In 1995, the University of California Board of Regents voted to ban the use of race/ethnicity in the admission process (University of California Office of the President, 2001). The California Civil Rights Initiative (Proposition 209), in 1996, banned affirmative action. Governor Gray Davis proposed that public and private high school graduates in California in the top four percent of his/her class receive admission to the University of California system. Conservatives argued that the plan would impact the quality and reputation of University of California schools, especially UC Berkley and UCLA. There was concern that more qualified students would lose their places to less qualified students. Also, there was concern that students that were automatically admitted from lower-quality schools would be set up for failure in the University of California system.

Florida Percent Plan

In November 1999, Governor Jeb Bush implemented "One Florida" (Executive Order 99-281) (1999) which eliminated the use of race- or gender-conscious decision in college and university admission. Bush implemented the Talented 20 policy in the Florida State University System. Under this policy, public high school graduates that finished in the top 20 percent of their class were guaranteed only system admission beginning in the fall 2000.

The NAACP filed an administrative challenge to One Florida, arguing that the plan involved inappropriate decision-making process that changed university admission policies. Even so, officials in the State University System were ordered to stop using race, national origin and gender as considerations for admission (Florida Board of Regents, 2000). Administrative Law Judge Charles Adams struck down the NAACP's administrative challenge and the Talented 20 policy went into effect. Race consciousness was, however, allowed in awarding scholarships, conducting outreach, or developing pre-college summer programs (Executive Order 99-281).

Horn and Flores (2003) note that the percent plans in Texas, California and Florida have important differences. The eligibility of students differs in each state. In Florida, only public school students are eligible. Texas and California offer the plans to public and private high schools students. California and Texas offer the access to the state university system. Texas also offers access to premier institutions. Horn and Flores (2003) argue that the percent plans have little impact on the most competitive universities. Students in Florida and California are not guaranteed automatic admission into the most selective universities. Studies suggest that eligible students would have been admitted to the institutions without a percent plan. They contend further that percent plans, when they work, "...serve as a kind of shorthand for what university officials know are actually systems of openly- or loosely-veiled race-attentive outreach, recruitment, support programs, and financial aid that enhance the likelihood of application, admission, and enrollment for some students" (59). They also argue that while the world is debating the future of affirmative action, there are serious problems with non-racial alternatives. They

note that affirmative action is an effective tool that universities need to keep campuses diverse and contend that percent plans alone are not a solution.

Students of different races do not have the same opportunities for a college education, according to Horn and Flores. They point out that the proportion of minority students is increasing, the achievement gap between racial groups has been growing since the 1990s, dropout rates are rising, public school are becoming more segregated along the lines of race and income and these schools are inferior. Opponents of affirmative action should consider the above statements and the fact that many Americans believe that colleges and university should have diverse student bodies, diverse faculty and courses that focus on diversity. A poll released by the Ford Foundation's Campus Diversity Initiative found that 71 percent of people think that diversity brings society together and 91 percent agree that the more we know about each other the better we all will get along. Two-thirds of the participants believe that institutions should take steps to ensure diversity in the student body, 75 percent believe that steps should be taken to ensure a diverse faculty, 69 percent agreed that courses and campus activities that focus on diversity have a beneficial effort on college students. (p. 25 – 26).

When reflecting on cases such as *Geier v. Alexander,* 593 F.Supp. 1263 (1984), the rationale behind affirmative action seemed to be justifiable for that moment in history. For this particular case the goal was to create a system of higher education that was tax supported where race was irrelevant. The defendants in this case constructed a plan in which predominately white institutions would aggressively recruit black students and faculty and vice versa for Tennessee State University, a historically black college or university. Because the plan failed, Tennessee State University and the University of Tennessee in Nashville were forced to merge into one desegregated institution that ultimately produced a more diverse environment on that campus.

Those who have worked on college campuses for more than 20 years see the everyday benefits of efforts to recruit and retain minority students. Since 1961 institutions have progressed from identifying affirmative action as a goal to voluntarily implementing diversity initiatives in our colleges and universities. According to Nichols et al. (2005) despite increases in minority enrollments and support programs, affirmation action continues to play a role in the admissions process.

In *Grutter v. Bollinger,* (02-241) 539 U.S. 306 (2003), the U.S. Supreme Court embraced the University of Michigan Law School's admission policy with the goal of creating a diverse student body population that is reflective of the United States. The outcomes of the Texas, Florida, and California percent plans were more difficult to determine because the top percentage of high school graduates may not necessarily reflect the population. Nichols, Ferguson, and Fisher (2005) declared that Texas, Florida, and California needed to revisit their plans in order to allow public colleges and universities to accomplish the goal of a diverse student body that would be beneficial to all Americans and contribute to an educated society where all would be able to live in unity, despite differences.

When looking at Texas's, Florida's, and California's percent plans, the decision of the *U.S. Supreme Court in Gratz v. Bollinger,* 123 S.Ct. 2411 (2003) played its role in history. However after meticulous examination, it became clear that percent plans did not meet the object of the court's decision to diversify college campuses. The problem with the University of Michigan's undergraduate admission policy was not its effort to create a diverse student body but the use of a point system to meet that objective. The Texas, Florida, and California methods not only limited opportunities, they also set hidden quotas (Nichols et al., 2005).

The Need for Intervention

Higher education has the potential to transform lives in a positive way. However despite the potential higher education has to transform lives, the gaps between the financial return associated with education beyond high school and earnings by level of education are increasing with time (McGlynn, 2011).

The Lumina Foundation for Education (2009) released a report entitled, *A Stronger Nation through Higher Education: How and Why Americans Must Meet a 'Big Goal' for College Attainment* in 2009. The report expresses the sense of urgency of getting more students into college and ensuring their success once they are there. The report states the following:

> Our nation – and every state within our nation – faces huge social and economic challenges. At Lumina Foundation for Education, we are convinced these challenges can be addressed only by educating many more people beyond high school. This means that we as a nation must continue to focus on approaches that make higher education more accessible and affordable for all. It also means that all students who come to college must leave with meaningful, high-quality degrees and credentials so they can contribute to the workforce and provide for themselves and their families. Current economic conditions have only made this priority clearer and more urgent. (p. 1)

The report continues, "improving higher education success rates is a critical national priority particularly…where most low-income, first-generation students begin higher education" (Lumina Foundation for Education, 2009, p. 5).

According to research by the Public Agenda (Johnson, Rochkind, Ott, & DuPont, 2009), the image of traditional college students living in dormitories, attending college full-time, and is aged 18 – 22 is off the mark. Looking at students of today:

- Forty-five percent of students in four-year institutions work more than 20 hours per week.
- Twenty-five percent of students attend residential colleges
- Twenty-three percent of college students have dependent children (U.S. Department of Education, 2010).

In *Measuring Up,* The National Center for Public Policy and Higher Education (2008) noted that there were states within the United States that do a better job of preparing students to attend college compared to 2006. In fact the report found that students were taking more rigorous college preparation courses. Texas, for example, nearly tripled the number of high school students who had taken at least one upper-level science course. While this appears to be good

news, it is overshadowed by the fact other nations are advancing more quickly than the United States.

Those who graduate from college are now more likely to have taken courses that prepared them for college. On the other hand, far too many students graduate from high school underprepared or unable to handle college-level work and therefore need remediation. Meanwhile access to college is moderately flat in America with small increases in some states and decreases in others. Additionally there are large disparities in higher education performance in reference to income, race-ethnicity, and geography.

According to Carnevale, Smith, and Strohl (2010) by the year 2018, the United States will need 22 million new college degrees (associates or higher) but fall short by at least three million. The nation will also need at least 4.7 million new workers with postsecondary certificates.

The notion is prevalent that many students are underprepared to be successful in college. In contrast, given the current status of United States where higher education is a presumed prerequisite to a middle class life and necessary for the nation to remain competitive economically, there is no just cause for leaving some behind (McGlynn, 2011).

Being underprepared for college-level work should not deter people from higher education (McGlynn, 2011). The challenge is for us to prepare students so that they are able to achieve. As Kuh, Kinzie, Schuh, and Whitt (2005) stated, "Teach the students you have, not the students you wish you had" (p. 78).

Student engagement has two key components that contribute to student success. The first is the amount of time and effort students put into their studies and other activities that lead to the experiences and outcomes that constitute student success. The second is the way the institution

allocates resources and organizes learning opportunities and services to induce students to

participate in and benefit from such activities (Kuh et al., 2005).

Role of Programs in Higher Education

One of the keys to helping students succeed is to set transitional experiences that are

intentionally introduces students to institutional values and academic expectations and exposes

them to resources and opportunities available to them on campus (Kuh et al., 2005). Tinto (1975)

developed a theoretical model of student retention and this model is still a common

conceptualization of the attrition phenomena in higher education. Tinto viewed colleges and

universities as organizations composed of two interacting systems: an academic system and a

social system. Student retention results come from a combination of students' entering

characteristics, their commitment to the institution, their commitment to goals, and their

academic and social experiences (integration into the campus environment). In other words the

college environment plays an essential role in determining student attitudes and behaviors toward

diverse peers. The campus environment is particularly important during the student's transition

period from high school into college (Gurin, Dey, Hurtado, & Gurin, 2002; Hurtado, Engberg,

Ponjoun, & Landreman, 2002; Jayakumar, 2008; Locks, Hurtado, Bowman, & Oseguera, 2008;

Saenz, 2005).

Engagement is a learned behavior, a behavior that is shaped before students entered

college. The results from a study performed by Hall, Cabrera, and Milem (2011) suggest that

structural diversity in the precollege environment creates the preconditions for students to

interact with diverse peers. Although the data do not allow them to explore what those

preconditions were that harnessed the potential of structural diversity, the researchers assumed

that "they emanated from high school practices" (Hall et al., 2011, p. 434).

According to Kuh et al. (2005) conditions characterizing a supportive campus environment include (1) an institutional emphasis on providing students with the support they need for academic and social success, (2) positive working and social relationships among different groups, (3) help for students in coping with their nonacademic responsibilities, and (4) high-quality student relationships with other students, faculty, and the institution's administrative personnel. The authors referenced an orientation at Kansas University where members of the faculty and staff ensure that students were equipped with resources to succeed and that students connect to a club, organization, or group during their first semester. Furthermore they concluded, "different groups of students need different types of academic and social support" (Kuh et al., 2005, p. 253).

Perna (2002) claimed that ''about one third of all colleges and universities offer at least one program to increase access for educationally or economically disadvantaged pre-collegiate students'' (p. 67). Even with these programs the year prior to this claim only 18% of African Americans and 10% of Hispanics complete a 4-year college degree by the time they are 29, compared to 34% of whites (Snyder & Hoffman, 2001). Native Americans students during this time were less likely to complete a college degree than any other ethnic group in the United States. This raises questions about the level of motivation for these demographic groups or the lack thereof. "More people, from a wider, deeper, and more diverse pool of undergraduates are going to college (Keller, 2001), therefore admitting only the most talented and well-prepared students is neither a solution nor an option" (Kuh et al., 2005, p. 8).

In a 1991 study Pascarella and Terenzini "estimated freshman-to-senior gains that averaged approximately .56 of a standard deviation for general verbal skills, .24 of a standard

deviation for general mathematical or quantitative skills, and .87 of a standard deviation for specific subject matter knowledge. These numbers represented improvements over the entering student competencies of approximately 21 percentile points, 9.5 percentile points, 30.8 percentile points, respectively. The second main conclusion was that the evidence was unclear as to when during the postsecondary experience these changes or gains in subject matter knowledge and academic skills are most likely to occur. Some evidence suggested that the greatest gains occurred during the first two years of college, while others suggested that students continue to make important gains through their senior year" (p. 66).

The best predictors of whether students will graduate are academic preparation and motivation (Adelman, 2004; Pascarella & Terenzini, 1991, 2005). McGlynn (2011) discusses motivation in her book and mentions two kinds of motivation defined by psychologists: *intrinsic motivation*, motivation from within one's self and *extrinsic motivation*, which is external motivation. Intrinsic motivation as the author illustrates in the context of college has to do with wanting to learn because of natural intellectual curiosity and desiring more knowledge. Extrinsic motivation, conversely, refers to learning for some external reward such as an "A" on an exam or the obtaining a college degree.

Before understanding motivation there must be an understanding of the generation currently enrolled in institutions of higher education. Those students born between 1982 and 2002, the millennial generation as they are often called, engage in social connections via cell phone, texting, and Facebook (McGlynn, 2011; Twenge, 2006). In order to reach this group, it is necessary to meet them where they are. Twenge (2006) has dedicated much of her work to studying generational differences. She suggested that culture has changed and therefore everyday practices have evolved to coincide with the changes in the culture.

Twenge (2006) argued that in order to understand these differences in generations you must understand the psychology of each generation. By examining people during different points in time, neglecting the stereotypes and based on data, there seems to be many similarities from generation to generation. The only difference is motivation.

In a 2011 lecture Twenge asked the audience to examine the lyrics to *The Greatest Love of All*, released by Whitney Houston in 1986. Below are the lyrics that she emphasized:

"Everybody's searching for a hero"
"People need someone to look up to"
"I never found anyone who fulfilled my needs"
"A lonely place to be"
"So I learned to depend on me"

In short the song focuses on preservation of self-esteem. So this current generation tends to have the notion that everyone is a winner, everyone gets a trophy, and there is no score keeping. This thinking, consequently, has carried over into today's educational institutions. Today's students feel that they are entitled to an education, and at the same time neglect the fact that an education must be earned. It is not an honor or form of recognition that is given away without regard for an individual's hard work, discipline, and perseverance. While many students have difficulty realizing this fact on their own, Twenge (2011) argued that the key to asphyxiating this "narcissistic barrier" is helping these students recognize that they are not alone.

Gibson and Bruno (2012) reported on the C-MORE Program, a cohort based model enabling undergraduates to begin building collaborations and developing a peer support group. Borrowing from the concepts of Tinto (1975), the C-MORE Program recognized the vital role of the social system in aiding students during their transition period into college. The program lent itself the fear of isolation and lack of self-esteem that Twenge (2011) had shared about this generation. In fact the cohort based model was adopted to avoid having students feel isolated

during their undergraduate academic experience. Additionally one of the program objectives was to help these undergraduates to build confidence and self-esteem necessary for them to succeed (Gibson & Bruno, 2012).

The Building Engineering & Science Talent (BEST) Board of Directors (2004) outlined eight design principles to guide higher education programs aimed at broadening participation, and these guides were applied in the development of the C-MORE Program. Table 2 provides an outline of these eight principles.

1. Institutional leadership: Program is institutionalized and included in the annual budget.
2. Targeted recruitment: Form partnership throughout and beyond the university for feeder systems
3. Engage faculty: Tenure and promotion process recognizes undergraduate mentoring as a valuable service
4. Personal attention: Mentored by a faculty research supervisor; free tutoring
5. Peer support: Students interact at meetings and some end of the year event
6. Enriched research experience: Mentored and monitored research
7. Bridging to the next level: Help keep students on track in their undergraduate programs
8. Continuous evaluation: Ongoing monitoring (Gibson & Bruno, 2012, p. 15).

Table 2
BEST Design Principles

Institutional Leadership	Commitment to inclusiveness across the campus community
Targeted Recruitment	Investing in and executing a feeder system, k–12
Engaged Faculty	Developing student talent as a rewarded faculty outcome
Personal Attention	Addressing, through mentoring and tutoring, the learning needs of each student
Peer Support	Student interaction opportunities that build support across cohorts and allegiance to institution, discipline, and profession
Enriched Research Experience	Beyond-the-classroom hands-on opportunities and summer internships that connect to the world of work
Bridging to the Next Level	Institutional relationships that help students and faculty to envision pathways to milestones and career development
Continuous Evaluation	Ongoing monitoring of process and outcomes that guide program adjustments to heighten impact

Noel-Levitz (2009) identified the top three practices used by all sectors of education in an effort to improve student retention. The three practices identified were academic support program, programs designed specifically for first-year students, and an institution-wide emphasis on undergraduate teaching and learning. Furthermore, the researcher found that there is a direct correlation between retention rates and graduation rates. According to research done by and provided to Noel-Levitz, student engagement is the key to retaining students.

Practices of Student Support Services

Student Support Services has been the focus of numerous studies in the literature. In 1975 Student Support Services was studied by the Educational Testing Service and the found "few effects on college performance over what might have expected from past performance as defined by high school grades" (Chaney, Muraskin, Cahalan, & Goodwin, 1998, p. 199). The authors also studied the impact of Student Support Services on retention rates for participants. The authors identified three measures of retention: second-year retention at the same institution, third-year retention at the same institution, and third-year retention at any institution. These results demonstrated that Student Support Services had a significant impact on all three measures of retention. Variance in the impact of the program was found to have some correlation to the services that students used and their level of participation.

Mahoney (1998) performed a quantitative study measuring academic performance, continuing education, and graduation date over a 4-year period for three groups: all undergraduates, Student Support Services participants, and students who did not participate in Student Support Services but were eligible. Measuring grade point averages, Mahoney found that the general undergraduates had the highest mean grade point average (2.77), followed by Student

Support Services participants (2.70), followed by eligible students who did not participate in Student Support Services (2.58). Mahoney also found that Student Support Services participants had the highest retention rates (72%) when compared to the general undergraduate population (67%) and student who did not participate in the program but had eligibility (59%). The same was found to be true when graduation rates were measured. Participants of Student Support Services program possessed the highest graduation rates (61%) when compared to the general undergraduate population (56%) and student who did not participate in the program but had eligibility (55%). These results showed that eligible students who participated in the Student Support Services program performed at a higher rate for each of the variables (grade point averages, retention rates, and graduation rates) than those eligible students who did not receive services from the program (Mahoney, 1998). However Student Support Services was second to the general undergraduate population in terms of grade point averages.

In 1997 Hebert performed a qualitative study to research the impact of Student Support Services at the University of Connecticut. This study examined the correlation between persistence and achievement. The results of the study supported the theories that favored student programs and the positive impact they have on college achievement and persistence of Student Support Services participants. More specifically cumulative grade point averages were found to be statistically significant predictors of persistence.

Another study of Student Support Services found a correlation between student persistence and services received (Chaney et al., 1998). Although the report showed that some pairings of services were more effective than others, "there was no clear evidence that one particular service was superior to another" (Chaney et al., 1998, p. 199). In 2003 the U.S. Department of Education found that participation in Student Support Services resulted in

increases in retention rates from first to second year (7%) and increases in retention rates from second year to third year (9%). During this study 2,900 students were tracked over 3 years and the greatest overall impact on students occurred during their first year (Devarics, 1997). In general the study found that students who participated in Student Support Services for more than 32 hours during their freshman year "raise[d] retention rates, grade point averages, and credit hours earned by disadvantaged students" (Devarics, 1997, p. 5).

The successes of Student Support Services are primarily cited because the program offers a variety of services and these services are designed to increase student integration (Chaney et al., 1998). The program also improves students' chances of success in college, following the theoretical backing of Tinto's (1975) model. Student Support Services programs are dedicated to providing students with the proper encouragement and assistance so that they can learn about themselves and realize their goals. Research suggests "student[s] that have been encouraged to recognize and [use] their strengths and are given tools to improve upon their weaknesses show remarkable improvement in the classroom" (Maxie, 2003, p. 1).

How College Affects Students

"Evidence attests to the vital role educational attainment plays in shaping subsequent occupational, social, and economic status" (Pascarella & Terenzini, 2005, p. 373). Educational attainment is defined by the authors as the number of years of schooling completed or degrees earned. This attainment plays two roles. The authors state the following about role of educational attainment:

> First, education serves an indirect role by mediating the influence of an individual's background resources (such as family socioeconomic status) on subsequent occupational status and income. At the same time, because family socioeconomic status shapes college enrollment independent of an individual's abilities or prior achievements, education

serves to extend advances an individual already holds in those areas. Second, education's role in the status attainment process can be direct through its enhancement of status attainment in ways and degrees unrelated to socioeconomic origins (Pascarella & Terenzini, 2005, p. 373).

In short, "completion of a baccalaureate degree is a central determinant of occupational status and income" (Pascarella & Terenzini, 2005, p. 373).

The authors, Pascarella and Terenzini, also identified a cohesive peer environment, frequent participation in college-sponsored activities, and a perception that the institution is concerned about its students as individuals as environmental conditions that exert independent effects on educational attainment. African-American students, for example, attending a predominantly Black institution and women at a women's college appeared to gain in educational attainment beyond what might be the case at predominantly White or coeducational institutions, respectively (Pascarella & Terenzini, 2005, p. 375). Furthermore access to education has not always been at the forefront of the education system; therefore, the level of preparedness varies among and within those who were initially denied postsecondary education.

Summary of Literature

A review of the literature was provided in Chapter 2 that included role of programs in public education and how they contribute to the success of students. Chapter 3 contains a description of the employed methodology for this study. A comprehensive description of the research findings is presented in Chapter 4. Finally Chapter 5 provides a summary of the findings, conclusions, and recommendations for further research and improvement of practice.

CHAPTER 3

METHODOLOGY

The purpose of this study was to examine and evaluate the use of outreach programs for underrepresented college students. By using archival data from the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011– 2012 school years, records were analyzed as a means to measure student and program success. Specific attention was given to the grade point averages, retention rates, and graduation rates of underrepresented students participating in a 1-year program designed specifically for freshmen versus the grade point averages, retention rates, and graduation rates of those underrepresented students participating in a multi-year program.

Quantitative research methods were used to assess programs' success rates using grade point averages, retention rates, and graduation rates as measures of success. The scores of program participants were compared to those of nonprogram participants and compared based on their participation in a 1-year program versus a multi-year program. Data collected were analyzed on year-by-year basis. The actual names of the student participants were not identified because of the confidential nature of this research. By evaluating the Quest for Success Program and Student Support Services at East Tennessee State University, it will be possible to assess whether these program have a positive impact on the academic achievement of these particular program participants.

Many institutions offer outreach programs design to increase the academic performance of their students especially those from historically underrepresented population classified as incoming freshmen. Consequently not many programs have been design to aid those students in subsequent years that follow freshman year. The purpose of this study was to determine if there

are significant differences in the success of those underrepresented students who participate in multi-year programs as opposed to those that participate in programs specifically designed for incoming freshmen. Using archival data the variables used in this study were directly and indirectly linked to measure program successes. Because the study focused on underrepresented students, purposeful selection was used to determine which students and which programs to analyze. This chapter includes information about the research design, the target population and sample, sources of data, procedures, and data analysis that were used in this research project.

The Quest for Success program was designed to provide historically underrepresented students with supplemental resources and training that would contribute to their success in East Tennessee State University's academic environment and beyond. Similar to the Quest for Success program, Student Support Services is a Federal outreach and student services program designed to identify and provide specific services for individuals from disadvantaged backgrounds (U.S. Department of Education, 2011). Both programs were intended to serve a very specific demographic group.

A variety of outreach programs have been specifically designed to aid underrepresented student populations as they transition to college (Kiyama, Lee, & Rhoades, 2012). The Quest for Success program and Student Support Services, though similar, operate using very different models. Quest for Success operates on a 1-year model, whereas Student Support Services is a multi-year program.

The Quest for Success program and Student Support Services were implemented with the presumption that these programs would cultivate positive outcomes for the students they serve, the program itself, as well as the university at-large. For the purposes of the research students' grade point averages and university retention rates and graduation rates were examined during

archival research collection. The archival data were analyzed at the end of each school year. Students' grade point averages and university retention rates and graduation rates for program participants were analyzed at least once per school year.

<center>Research Questions and Null Hypotheses</center>

Through quantitative analysis, the grade point averages of 250 East Tennessee State University students who were involved in either the Quest for Success program (125) or Student Support Services (125) were analyzed, compared, and cross-referenced with 125 students do not participate in either program using archival data from the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011 – 2012 school years. Furthermore this study included a comparison retention rates and graduation rates; however, the population was examined due to the manner in which data was provided. Additionally the use of the population provided more precise retention rates and graduation rates in this study.

For research purposes this study was an analysis of possible correlations between program success and student success using the variables of grade point averages, retention rates, and graduation rates based on archival data collected. The following research questions and null hypotheses were selected as the focus of this investigation.

Research Question 1

Is there a significant difference in the grade point averages of those underrepresented students who participate in the Quest for Success Program, TRiO's Student Support Services, and nonprogram participants?

<center>45</center>

H_o1:   There is no significant difference in the grade point averages of those

underrepresented students who participate in the Quest for Success Program,

TRiO's Student Support Services, and nonprogram participants.

Research Question 2

Is there a significant difference between the high school grade point averages and college

grade point averages?

H_o2:   There is no significant difference between the high school grade point averages

and college grade point averages.

Research Question 3

Do the differences in college grade point averages among the three programs vary

significantly as a function of high school grade point averages?

H_o3:   The college grade point averages among the three programs do not vary

significantly as a function of high school grade point averages.

Research Question 4

Do the differences in college grade point averages among the three programs vary

significantly as a function of gender?

H_o4:   The college grade point averages among the three programs do not vary

significantly as a function of gender.

Is there a significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs?

H_o5: There is no significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs.

Research Question 6

Is there a significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs?

H_o6: There is no significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs.

<div align="center">Population</div>

Approximately 375 student records were observed for the purposes of obtaining mean grade point averages for this study. A sample of 125 Quest for Success students was randomly selected as well as a random sample of 125 Student Support Services students. Additionally 125 students classified as underrepresented from the general population were randomly selected to compare the successes of students within these programs with the general campus population. For the purposes of obtaining retention rates and graduation rates the entire population was examined due to the manner in which data were provided. The use of the population also provided more precise retention rates and graduation rates in this study. Participants of Quest for Success Program and Student Support Services consist of both male and female students, and

these students embody the underrepresented population on the campus of East Tennessee State University based on their race-ethnicity, socioeconomic status, being a first generation student, or the presence of some disability.

Tables 2 and 3 and Figure 1 below provide demographic information regarding the general population at ETSU in 2011.

Table 3
Enrollment by Ethnicity-Race, 2011

Ethnicity/Race Categories	Fall 2011 Number	%
Alaskan Native/American Indian	59	0.40
Asian	201	1.37
Black/African American	828	5.65
Hispanic/Latino	269	1.83
Native Hawaiian/Pacific Islander	16	0.11
White	12,377	84.42
Nonresident Aliens	295	2.01
Two or More Races	263	1.79
Ethnicity/Race Unknown	354	2.41

Source: ETSU Fact Book

Table 4

Enrollment by Gender, 2011

Gender	Students	%
Men	6,188	42.20
Women	8,474	57.80
Total	14,662	

Source: ETSU Fact Book
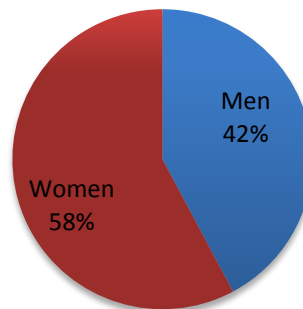
Figure 1: Enrollment by Gender

Sources of Data

The quantitative data used to measure the success of the Quest for Success program and Student Support Services include grade point averages, retention rates, and graduation rates. Using East Tennessee State University's information system, Argos, all data including grade

point averages, retention rates, and graduation rates comprised the data base for this study. The information system contains information on all students, which can be attained through an internet-based form upon entering the student's E-number, an identification number used by East Tennessee State University.

Data Collection

Prior to beginning this study, permission to conduct the research was obtained from the ETSU Institutional Review Board (IRB). This research was exempted from review by the IRB because it did not meet the definition of research involving human subjects. The IRB exemption letter can be found in Appendix A.

This quantitative study analyzed secondary data including grade point averages, retention rates, and graduation rates. The students' grade point averages reflect their academic progress; the students' retention rates reflect their commitment; and the students' graduation rates reflect goal completion. These three areas of measurement were collected for the end of each school year dating back to 2008.

Using Argos, the university's computerized database, archival student grade point averages were obtained as part of the data collection. The Argos system was also used to determine whether students were retained and whether students had graduated from ETSU. Retention was based on the students' enrollment status from their first year to their second year. Likewise graduation rates were based on whether the students obtained a degree from ETSU.

All data were collected from East Tennessee State University's student information database. An Academic Counselor from University Advisement collected and coded data from the Argos database on Quest participants and a random sample of underrepresented students

from the general population to assure that anonymity and confidentiality are both protected. A similar approach was used for TRiO's Student Support Services. A member of the staff for Student Support Services provided coded data on students participating in this program.

<u>Data Analysis</u>

For purposes of this study three measures of academic achievement (grade point averages, retention rates, and graduation rates) were analyzed to gauge the effectiveness of outreach programs. Data were compiled, organized, and reviewed for descriptive statistical analysis. To conduct a successful descriptive analysis, data were entered into Statistical Package of the Social Science (SPSS). A 0.5 level of significance (alpha) was used for the data analysis. The results of the data analyses are presented throughout Chapter 4 of the research study and comprehensive grade point averages can be found in the Appendices.

Research question 1 pertains to students' grade point averages and a means comparison; therefore, an analysis of variance (ANOVA) was used to determine whether there were significant differences in the grade point averages between programs (Quest, Student Support Services, and nonprogram participants). The program served as the independent variable and the dependent variable was the mean grade point average.

Research question 2 is an examination of whether there are significant differences in high school grade point averages and college grade point averages. A paired-sample *t* test was conducted to examine these differences with the inclusion of a correlation coefficient.

A two-way ANOVA was conducted to examine research questions 3 and 4. Question 3 is an examination of the mean college grade point averages between each program as a function of mean high school grade point average. The dependent variable was the mean college grade point

average and the independent variables were programs and ranges for high school grade point averages. Ranges for high school grade point averages were less than 2.5, 2.5 – 3.0, 3.01 – 3.5, and greater than 3.5.

Similarly research question 4 is an examination of mean college grade point averages between each program as a function of gender. The dependent variable was the mean college grade point average and the independent variables were programs and gender (male or female).

A two-way contingency table analysis with the inclusion of a chi-square analysis was conducted to examine research questions 5 and 6 that pertained to retention rates and graduation rates, respectively.

Chapter Review

The purpose of this study was to determine if there are significant differences in the successes of those underrepresented students that participate in Student Support Services programs as opposed to those that participate in the Quest for Success program at East Tennessee State University. Specific attention was given to grade point averages, retention rates, and graduation rates of program participants. The following chapters examine and review the collected data and analyze the findings using the computer program SPSS. These findings may be used to improve practices and provide recommendations for further study.

CHAPTER 4

FINDINGS

This chapter presents the analysis of research data obtained from Quest participants, TRiO's Student Support Services, and underrepresented students who did not participate in either program at East Tennessee State University. Data pertaining to student grade point averages, retention rates, and graduation rates were analyzed using the Statistical Package of the Social Sciences (SPSS). The data obtained were used to answer six research questions. Research question 1 was analyzed using an Analysis of Variance (ANOVA), research question 2 was analyzed by way of a paired-samples t test, research questions 3 and 4 were answered using two-way ANOVAs, and the remaining research questions (5 and 6) pertaining to retention rates and graduation rates were analyzed using the two-way contingency table analysis (chi-squared test); however, research question 6 used a 4-year graduation rate for comparison due to lack of data for years prior to 2008 although it is common practice to use a 6-year graduation rate.

The purpose of this study was to determine if there were significant differences in the successes of those underrepresented students who participated in Student Support Services programs as opposed to those who participated in the Quest for Success program. Additionally the results of these two programs were compared to nonprogram participants who were also classified as underrepresented. Data were collected and compared for the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011 – 2012 school years.

<center>Demographic Characteristics</center>

For the purposes of this study a random sample of 125 for each of the three groups was analyzed and yielded the following demographic characteristics: Gender: Male (39%), female (61%). Ethnicity: American Indian (1%), Asian or Pacific Islander (6%), Black, not of Hispanic Origin (45%), Hispanic (7%), White, not of Hispanic Origin (32%), Not specified (9%). A total of 375 students were analyzed. Table 5 contains a more detailed summary of the demographic characteristics described above.

Table 5
Participants' Demographics

Demographics		N	%
Quest for Success			
Gender	Male	48	38
	Female	77	62
Ethnicity	Asian or Pacific Islander	1	1
	Black, not of Hispanic Origin	84	66
	Hispanic	5	4
	White, not of Hispanic Origin	9	7
	Not specified	27	22
Student Support Services			
Gender	Male	41	67
	Female	84	33
Ethnicity	Asian or Pacific Islander	2	2
	Black, not of Hispanic Origin	7	5
	White, not of Hispanic Origin	110	88
	Not specified	6	5
No program			
Gender	Male	58	46
	Female	67	54
Ethnicity	American Indian	6	5
	Asian or Pacific Islander	19	15
	Black, not of Hispanic Origin	79	63
	Hispanic	21	17

<u>Research Question 1</u>

Is there a significant difference in the grade point averages of those underrepresented students who participate in the Quest for Success Program, TRiO's Student Support Services, and nonprogram participants?

H$_o$1:   There is no significant difference in the grade point averages of those underrepresented students who participate in the Quest for Success Program, TRiO's Student Support Services, and nonprogram participants.

A one-way analysis of variance was conducted to determine whether there were any differences in the grade point averages of students participating in different student outreach programs at East Tennessee State University. The independent variable, the outreach program, included three groups: Quest for Success, Student Support Services, and nonprogram participants. The dependent variable was the mean grade point averages for each of the three groups. The ANOVA was significant, $F(2,372) = 13.259, p < .001$. Therefore the null hypothesis was rejected. The strength of the relationship between the student outreach programs and the mean grade point averages as assessed by η^2 was moderate, with student outreach programming accounting for 7% of the variance in mean grade point averages.

Because the overall F test was significant, post hoc multiple comparisons were conducted to evaluate pairwise difference among the means of the three groups. A Tukey procedure was selected for the multiple comparisons because equal variances were assumed. There was a significant difference in the means between the group participating in Student Support Services (M = 2.75, SD = .86) and the Quest for Success group (M = 2.20, SD = .87, $p < .001$) and between the group participating in Student Support Services and nonprogram participants (M = 2.34, SD = .90, $p = .001$). However, there was not a significant difference between the Quest for

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Success group and nonprogram participant group ($p = .415$). The Student Support Services group

possessed the greatest mean GPA compared to the other two groups. The 95% confidence

intervals for the pairwise differences as well as the means and standard deviations for the three

program groups are reported in Table 6. The mean GPA for the Student Support Services was

significantly higher than the mean for the Quest for Success group and the mean for nonprogram

participants as reported in Figure 2. The numbers in the boxplot in Figure 2 represent the

individual cases that are outliers.

Table 6
Means and Standard Deviations with 95% Confidence Intervals of Pairwise Differences

Program group	N	M	SD	No Program	Quest
No Program	125	2.34	.90		
Quest	125	2.20	.87	-.12 to .40	
SSS	125	2.75	.86	-.67 to -.15	-.81 to -.29
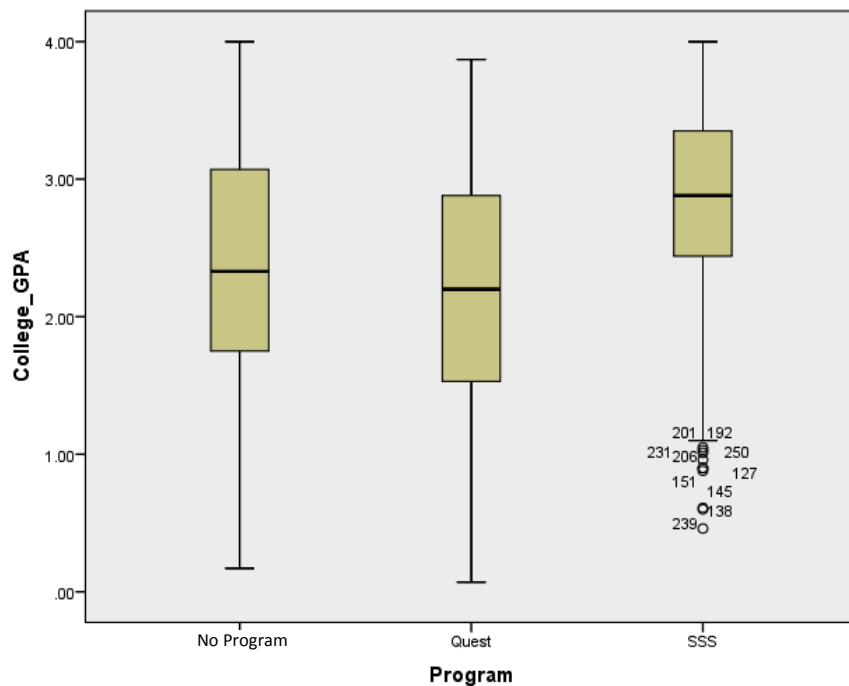
Figure 2. Boxplots of Mean College Grade Point Averages for All Programs.

Is there a significant difference between the high school grade point averages and college grade point averages?

Table 7 shows the means and standard deviations of grade point averages.

Table 7
Means and Standard Deviations of Grade point Averages

GPA	N	M	SD
College GPA	375	2.43	.91
High school GPA	375	3.10	.63

H$_o$2: There is no significant difference between the high school grade point averages

and college grade point averages.

A paired-sample *t* test was conducted to evaluate whether there was a significant difference between students' high school grade point averages and college grade point averages. The results indicated that the mean high school grade point average (*M* = 3.10, *SD* = .63) was significantly greater than the mean college grade point average (*M* = 2.43, *SD* = .91), *t*(374) = 15.82, *p* < .001. Additionally a statistically significant correlation of .46 (*p* < .001) was observed between the two means. The standardized effect size index, *d*, was .82, which indicated a large effect size. Figure 3 illustrates the difference between the two GPAs with considerable overlap in the distributions of high school grade point averages and college grade point averages. The 95% confidence interval for the mean difference between the two rankings was -.76 to -.59. The numbers outside of the boxplot in Figure 3 represent the individual cases that are outliers.
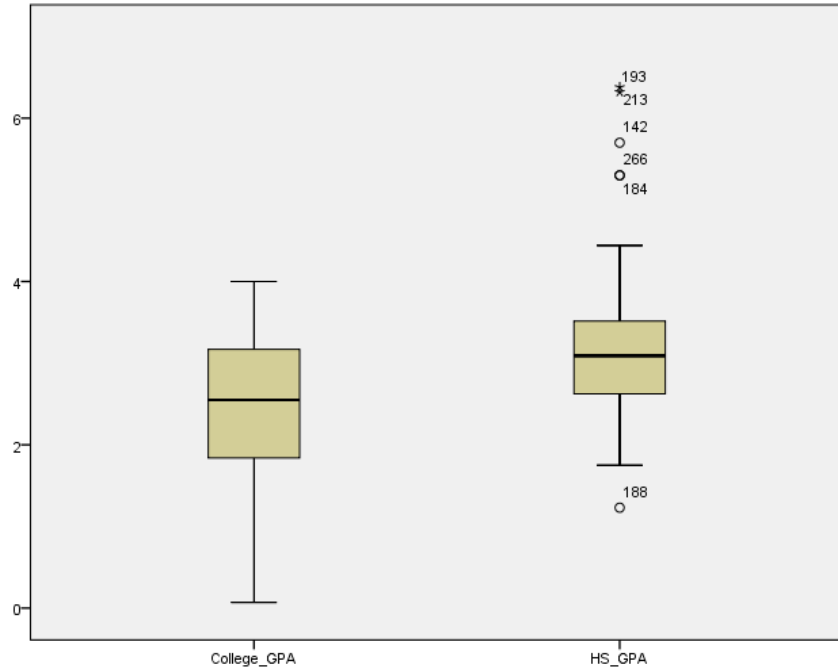
Figure 3. Boxplots of College GPA and High School GPA.

Research Question 3

Do the differences in college grade point averages among the three programs vary

significantly as a function of high school grade point averages?

The means and standard deviations for college grade point averages in relation to high

school grade point averages and program are shown in Table 8.

Table 8

Means and Standard Deviations for College Grade Point Averages by HS GPA and Program

HS_GPA	Program	M	SD	N
< 2.5	No Program	1.69	.75	28
	Quest for Success	1.81	.83	34
	Student Support Services	2.68	.85	9
2.5 – 3.0	No Program	2.18	.83	33
	Quest for Success	2.02	.83	44
	Student Support Services	2.29	.79	19
3.01 – 3.5	No Program	2.30	.81	34
	Quest for Success	2.53	.78	35
	Student Support Services	2.40	.91	44
> 3.5	No Program	3.15	.55	30
	Quest for Success	2.98	.63	12
	Student Support Services	3.20	.60	53

H_o3: The college grade point averages among the three programs do not vary significantly as a function of high school grade point averages.

A 3 × 4 ANOVA was conducted to evaluate the relationship between three programs (Quest, SSS, and none) and four high school grade point average ranges (less than 2.5, 2.5 – 3.0, 3.01 – 3.5, and greater than 3.5) on the college grade point averages of students. The means and standard deviation for college grade point averages as a function of the two factors are presented in Table 7. The ANOVA indicated no significant interaction between high school grade point averages and programs, $F(6, 363) = 2.05$, $p = .06$, $\eta^2 = .03$, but significant main effects for high school grade point average ranges, $F(3, 363) = 24.48$, $p < .001$, $\eta^2 = .17$, and programs, $F(2, 363) = 4.72$, $p = .01$, $\eta^2 = .03$. The high school grade point average main effect indicated that students with higher high school grade point averages tend to have significantly greater college grade point averages as illustrated on Figure 4 below. It is also worth noting the increase in mean college grade point average for those Student Support Services students who earned high school

grade point averages less than 2.5. The numbers in the boxplot in Figure 4 represent the individual cases that are outliers.
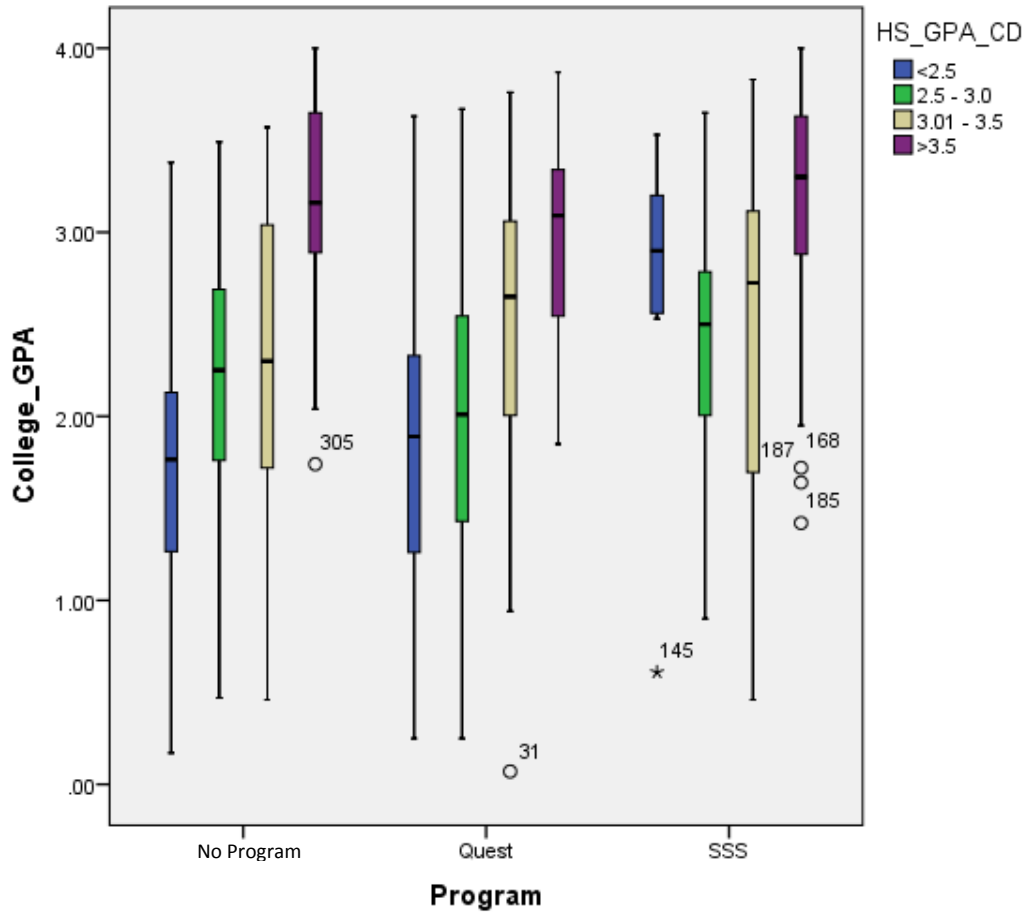
Figure 4. Boxplot of College GPA by program and High School GPA.

The primary purpose of the study was to determine which program is more effective. Follow-up analyses to the main effect for programs examined this issue. The follow-up tests consisted of all pairwise comparisons among the three programs. The Tukey HSD procedure was used to control for Type I error across the pairwise comparison. The results of this analysis indicate that students of Student Support Services have significantly higher grade point averages than the student of Quest for Success or nonprogram participants. There was no significant difference between the Quest for Success participants and nonprogram participants. Overall the

3×4 ANOVA indicates significantly higher mean grade point averages for Student Support Services.

<u>Research Question 4</u>

Do the differences in college grade point averages among the three programs vary significantly as a function of gender?

The means and standard deviations for college grade point averages in relation to gender and program are shown in Table 9.

Table 9
Means and Standard Deviations for College Grade Point Averages by Gender and Program

HS_GPA	Program	M	SD	N
Male	No Program	2.17	.88	58
	Quest for Success	2.07	.93	48
	Student Support Services	2.53	.93	41
Female	No Program	2.48	.89	67
	Quest for Success	2.27	.83	77
	Student Support Services	2.85	.81	84

H_o4:   The college grade point averages among the three programs do not vary significantly as a function of gender.

A 3×2 ANOVA was conducted to evaluate the relationship between three programs (Quest, SSS, and none) and gender on the college grade point averages of students. The means and standard deviation for college grade point averages as a function of the two factors are presented in Table 9. The ANOVA indicated no significant interaction between gender and programs, $F(2, 369) = .18$, $p = .84$, $\eta^2 = .001$, but significant main effects for gender $F(1, 369) = 8.94$, $p = .003$, $\eta^2 = .02$, and programs, $F(2, 369) = 10.63$, $p < .001$, $\eta^2 = .05$. The gender main effect indicated that females tend to have greater college grade point averages than males as

illustrated on Figure 5 below, but it was not the focus of this study. The numbers in the boxplot in Figure 5 represent the individual cases that are outliers.

The primary purpose of the study was to determine which program is more effective. Follow-up analyses to the main effect for programs examined this issue. The follow-up tests consisted of all pairwise comparisons among the three programs. The Tukey HSD procedure was used to control for Type I error across the pairwise comparison. The results of this analysis indicate that students of Student Support Services have significantly higher grade point averages than the student of Quest for Success and nonprogram participants. There was no significant difference between the Quest for Success participants and nonprogram participants. Overall the 3×2 ANOVA indicates significantly better performance for Student Support Services.
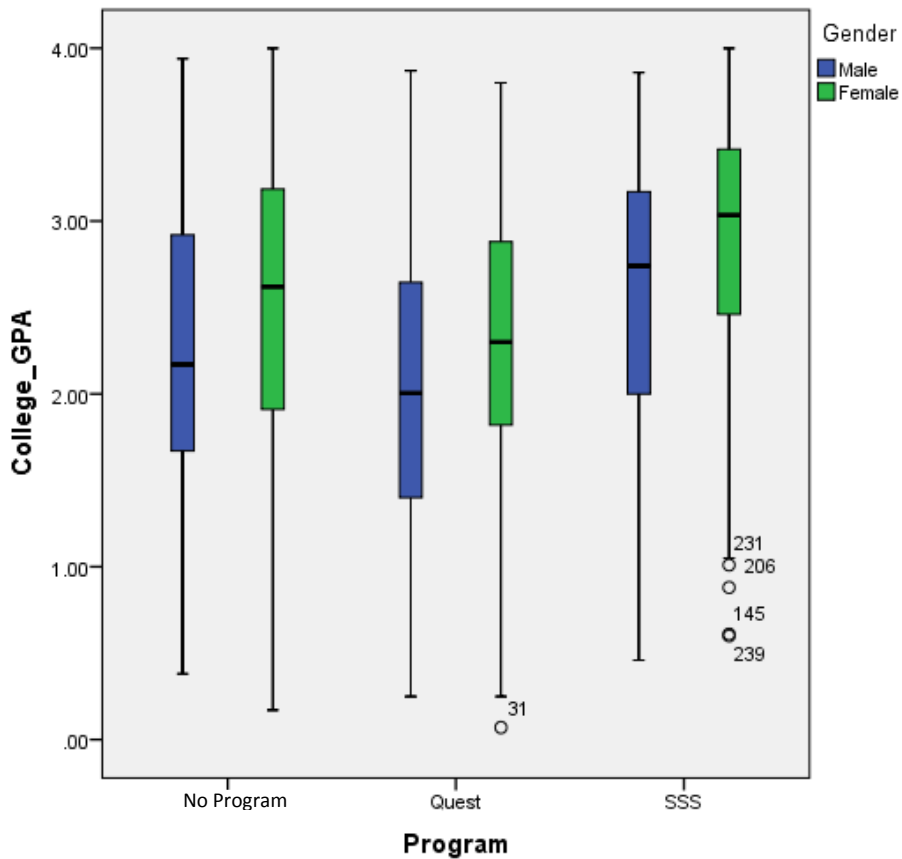
Figure 5. Boxplot of College GPA by Program and Gender.

Is there a significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs?

Table 10 shows the retention frequencies for the Quest for Success program, Student Support Services, and Nonprogram participants. For purposes of this study the population of underrepresented students was used with the anticipation of gauging more accurate retention rates for these groups. Retention of a student from freshman year to sophomore year is indicated by 'Yes' while 'No' indicates that the student was not retained by ETSU.

Table 10
Retention Frequencies

	Quest	SSS	None	Total
Yes	234	279	499	1,012
No	115	79	262	456
Total	349	358	761	1,468

H$_o$5: There is no significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs.

A two-way contingency table analysis was conducted to evaluate whether students had significantly higher retention rates based on their participation in student outreach programs. The two variables were programs with three groups (Quest, SSS, and No Program) and retention of students from fall of their freshman year to fall of the following year with two levels (retained and not retained). Programs and retention rates were found to be significantly related, Pearson $\chi^2(2, N = 1468) = 18.14, p < .001$, Cramér's V = .11. The proportions of students retained within each program were .67 for Quest for Success, .79 for Student Support Services, and .66 for

nonprogram participants. Figure 6 illustrates the frequencies of retention within the program categories.
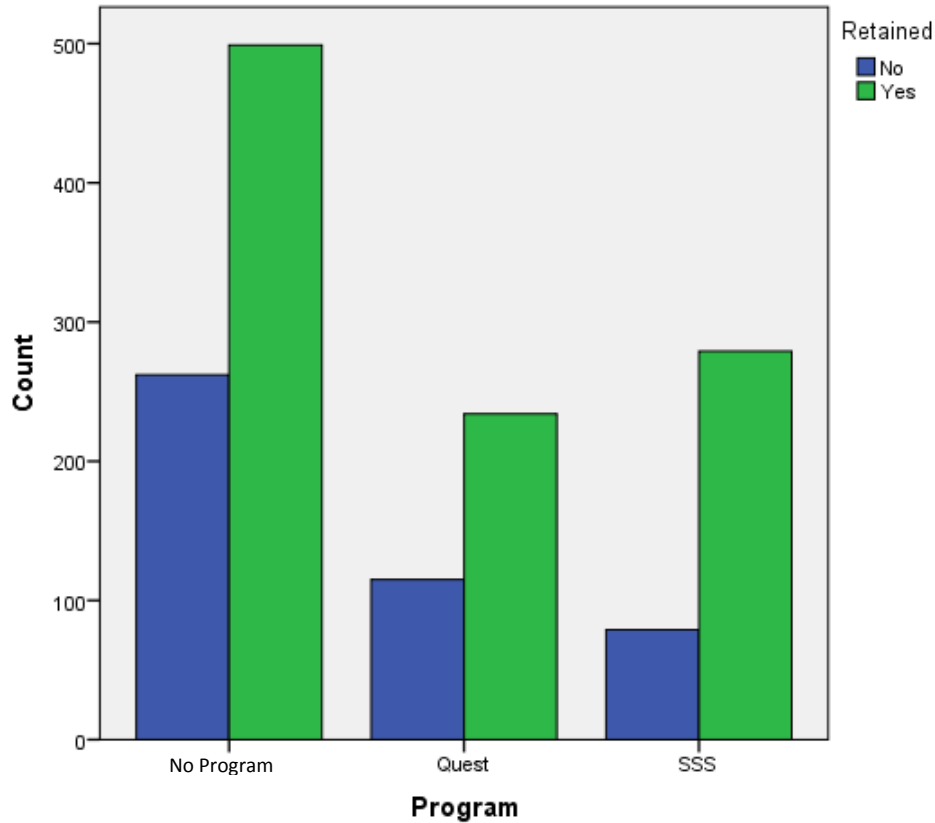
Figure 6. A Clustered Bar Chart of Retention Within Programs.

Follow-up pairwise comparisons were conducted to evaluate the differences among these proportions. The Holm's sequential Bonferroni method was used to control for Type I error at the .05 level across all three comparisons. A *p* value less than or equal to alpha using this method indicates a significant difference. Table 11 shows the results of these analyses.

Table 11
Results for the Pairwise Comparison

Comparison	Pearson chi-square	*p* value (Alpha)	Cramér's V
Quest vs. SSS	10.52*	.001 (.017)	.12
Quest vs. None	.23	.629 (.025)	.01
SSS vs. None	17.56*	< .001 (.050)	.13

*p value ≤ alpha

The first pairwise comparison was conducted between Quest for Success and Student Support Services. Results of this analysis found these two programs and retention rates to be significantly related, Pearson $\chi^2(1, N = 707) = 10.52$, $p = .001$, Cramér's V = .12. The proportions of students retained within each program were .67 for Quest for Success and .78 for Student Support Services. The probability of a student being retained by the university was approximately 1.18 (.79/.67) times more likely if the student participated in Student Support Services as opposed to Quest for Success. Figure 7 illustrates the frequencies of retention within the two program categories.

Figure 7. A Clustered Bar Chart of Retention Within Quest and SSS.

The second pairwise comparison was conducted between Quest for Success and nonprogram participants. Retention frequencies for these groups can be found in Table 12.

Table 12

Retention Frequencies

	Quest	None	Total
Yes	234	499	733
No	115	262	377
Total	349	761	1,110

Results of pairwise comparison found that these two groups and retention rates were not significantly related, Pearson $\chi^2(1, N = 1110) = .23$, $p = .63$, Cramér's V = .01. The proportions of students retained within each program were .67 for Quest for Success and .66 for nonprogram participants. Figure 8 illustrates the frequencies of retention within the two program categories.

Figure 8. A Clustered Bar Chart of Retention Within Quest and No Program.

Finally a pairwise comparison was conducted between Student Support Services and nonprogram participants. Retention frequencies for these groups can be found in Table 13.

Table 13

Retention Frequencies

	None	SSS	Total
Yes	499	279	778
No	262	79	341
Total	761	358	1,119

Results from the pairwise comparison showed a significant relationship between these two programs and retention rates, Pearson $\chi^2(1, N = 1119) = 17.56$, $p < .001$, Cramér's V = .13. The proportions of students retained within each program were .78 for Student Support Services and .66 for nonprogram participants. Figure 9 illustrates the frequencies of retention within the two program categories. Student Support Services had a significantly higher retention rate than nonprogram participants.
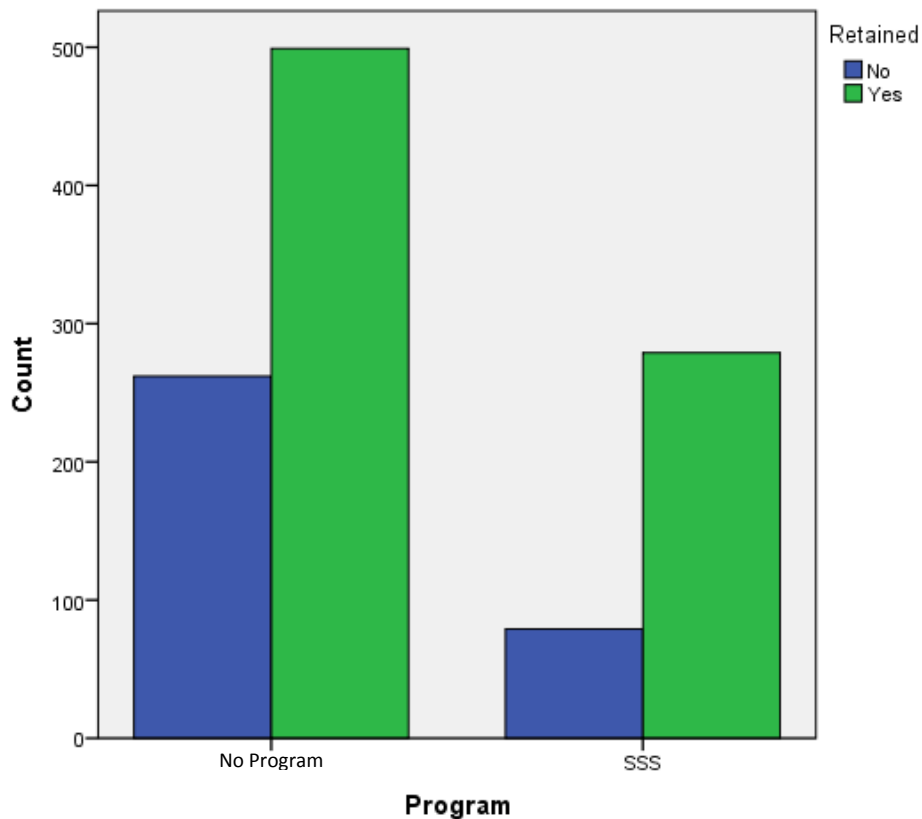
Figure 9. A Clustered Bar Chart of Retention Within SSS and No Program.

Is there a significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs?

Table 14 shows the graduate frequencies for the Quest for Success program, Student Support Services and nonprogram participants assuming a 4-year graduation rate. For purposes of this study the entire population of underrepresented students was used with the anticipation of gauging more accurate graduation rates for these groups. Graduation is indicated by 'Yes' while 'No' indicates that they have not graduated from ETSU.

Table 14
Graduate Frequencies

	Quest	SSS	None	Total
Yes	6	38	64	108
No	87	197	307	591
Total	93	235	371	699

H_o6: There is no significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs.

A two-way contingency table analysis was conducted to evaluate whether students had significantly higher graduation rates based on their participation in student outreach programs. The two variables were programs with three groups (Quest, SSS, and No Program) and degree completion with two levels (graduated and not graduated). Programs and graduation rates were found to be significantly related, Pearson $\chi^2(2, N = 699) = 6.78, p = .03$, Cramér's V = .10. The proportions of students graduated within each program were .07 for Quest for Success, .16 for Student Support Services, and .17 for nonprogram participants. Figure 10 illustrates the frequencies of degree completion within the program categories.
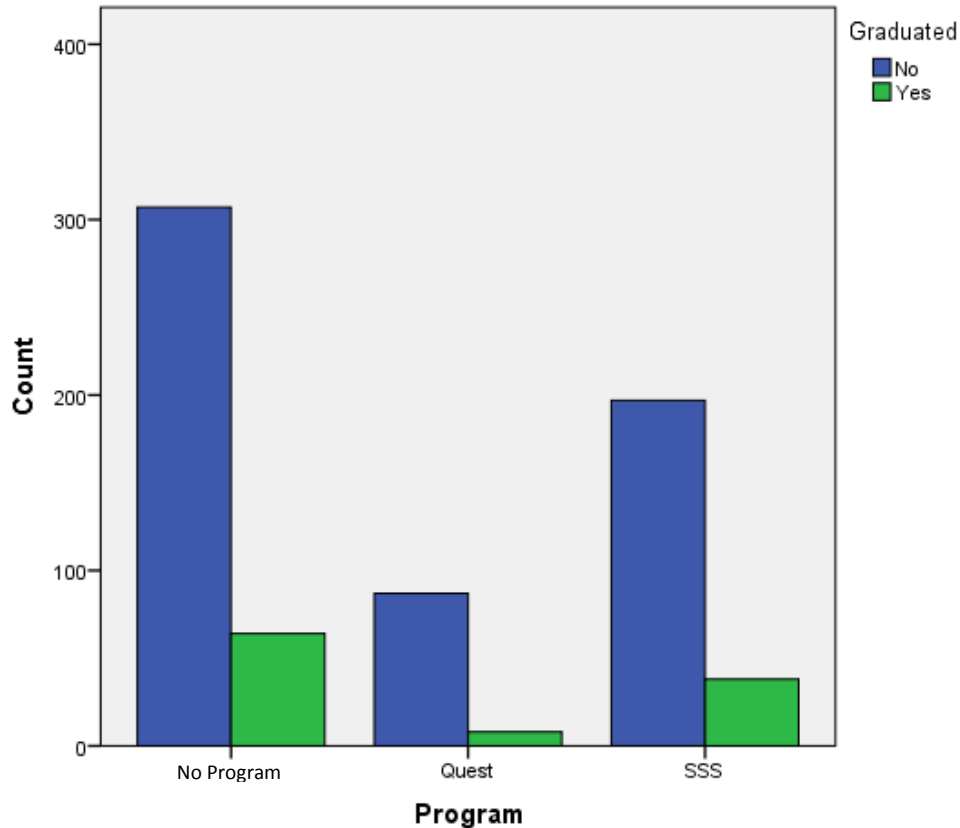
Figure 10. A Clustered Bar Chart of Degree Completion Within Programs.

Follow-up pairwise comparisons were conducted to evaluate the differences among these

proportions. The Holm's sequential Bonferroni method was used to control for Type I error at

the .05 level across all three comparisons. A *p* value less than or equal to alpha using this method

indicates a significant difference. Table 15 shows the results of these analyses.

Table 15
Results for the Pairwise Comparison

Comparison	Pearson chi-square	*p* value (Alpha)	Cramér's V
Quest vs. None	6.77*	.009 (.017)	.12
Quest vs. SSS	5.42*	.020 (.025)	.13
SSS vs. None	.12	.729 (.050)	.01

*p value ≤ alpha

The first pairwise comparison was conducted between Quest for Success and nonprogram participants. Results of this analysis found these two groups and graduation rates to be significantly related, Pearson $\chi^2(1, N = 464) = 6.77$, $p = .01$, Cramér's V = .12. The proportions of students who graduated within each program were .07 for Quest for Success and .17 for nonprogram participants. Figure 11 illustrates the frequencies of degree completion within the two program categories. Quest for Success students had lower graduation rates than nonprogram participants.
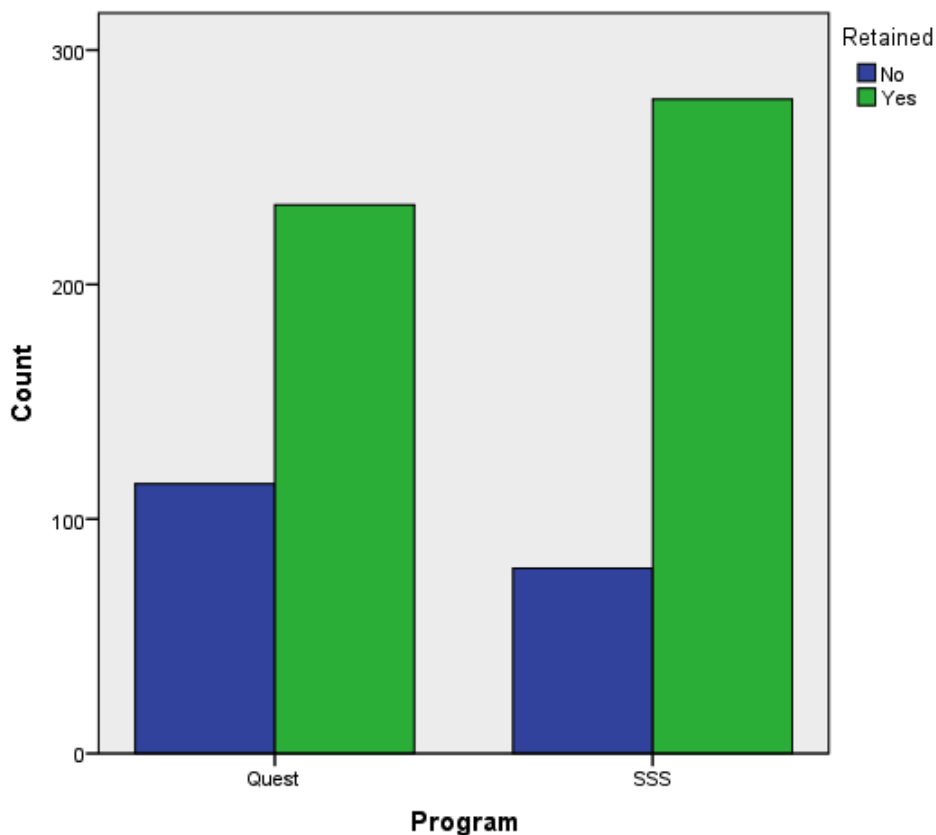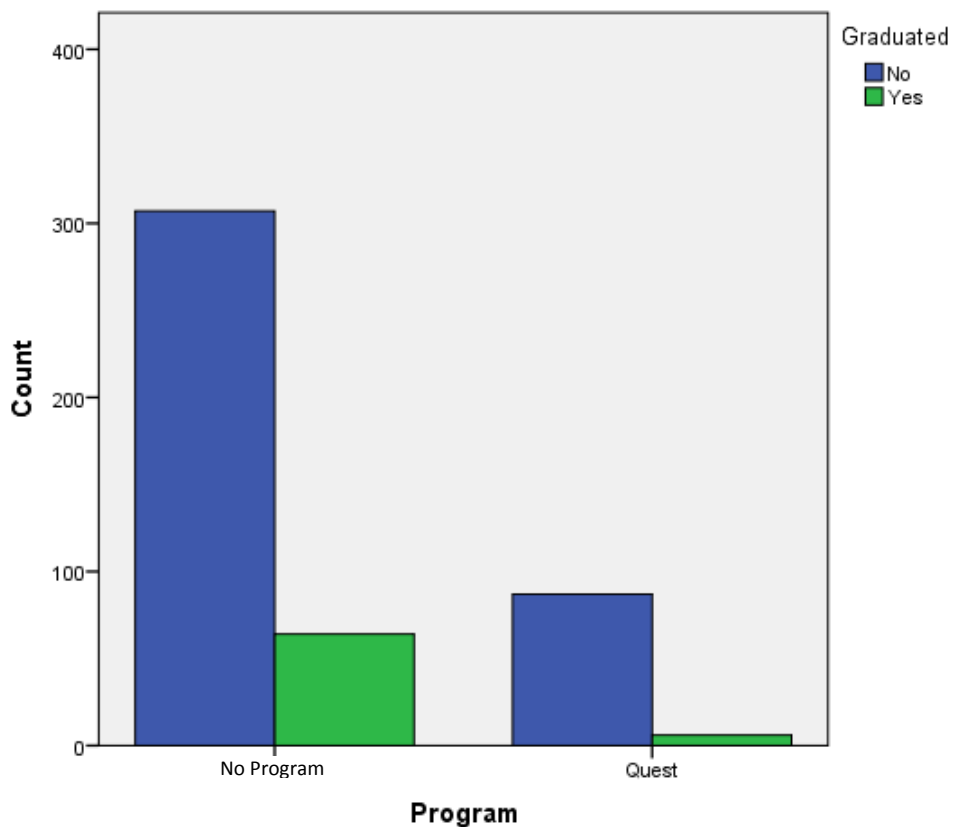

Figure 11. A Clustered Bar Chart of Degree Completion Within Quest and No Program.

The second pairwise comparison was conducted between Quest for Success and Student Support Services. Graduation frequencies for these groups can be found in Table 16. These frequencies represent the number of students who graduated from the university.

Table 16
Graduate Frequencies

	Quest	SSS	Total
Yes	6	38	44
No	87	197	284
Total	93	235	328

Results from the pairwise comparison showed a significant relationship between these two programs and degree completion, Pearson $\chi^2(1, N = 328) = 5.42, p = .02$, Cramér's V $= .13$. The proportions of students that graduated within each program were .16 for Student Support Services and .07 for Quest participants. The probability of a student graduating from the university was approximately 2.28 (.16/.07) times more likely if the student participated in Student Support Services as opposed to Quest for Success. Figure 12 illustrates the frequencies of degree completion within the two program categories.
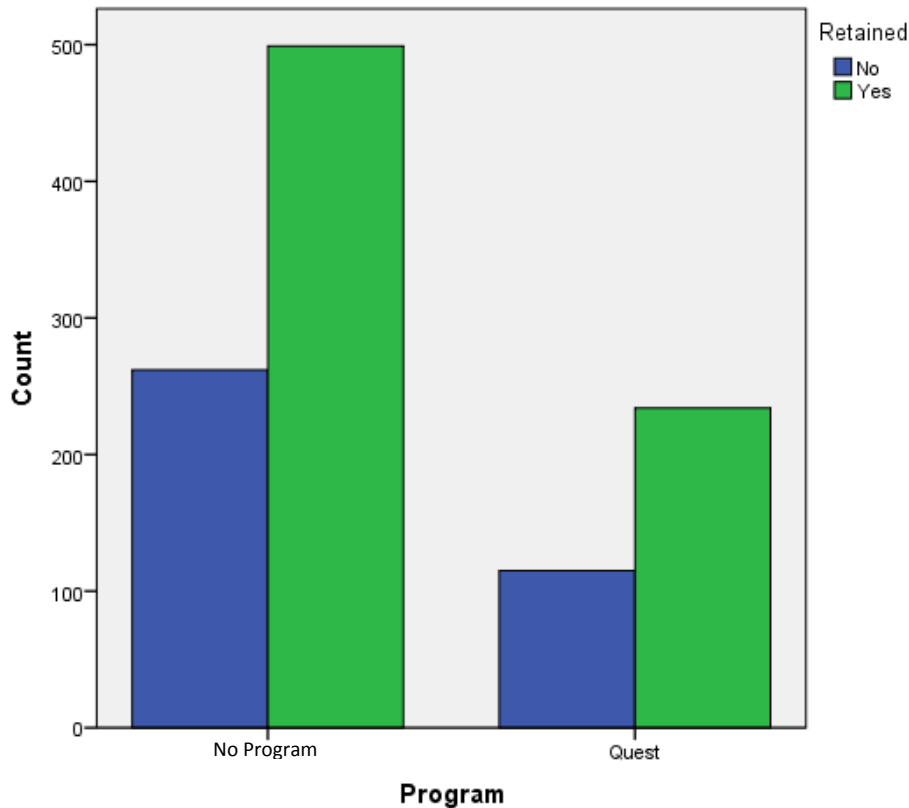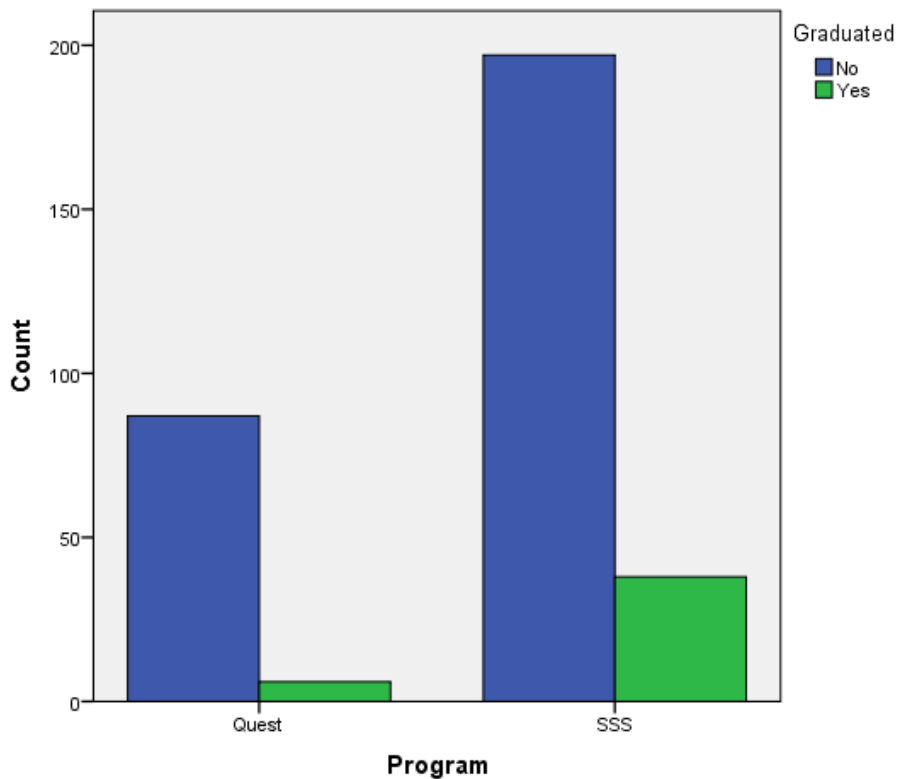

Figure 12. A Clustered Bar Chart of Degree Completion Within Quest and SSS.

Finally a pairwise comparison was conducted between Student Support Services and nonprogram participants. Graduation frequencies for these groups can be found in Table 17.

Table 17
Graduate Frequencies

	None	SSS	Total
Yes	64	38	102
No	307	197	504
Total	371	235	606

Results of this analysis found that these two groups and graduation rates were not significantly related, Pearson $\chi^2(1, N = 606) = .12$, $p = .73$, Cramér's $V = .01$. The proportions of students who graduated within each program were .16 for Student Support Services and .17 for nonprogram participants. Figure 13 illustrates the frequencies of degree completion within the two program categories.
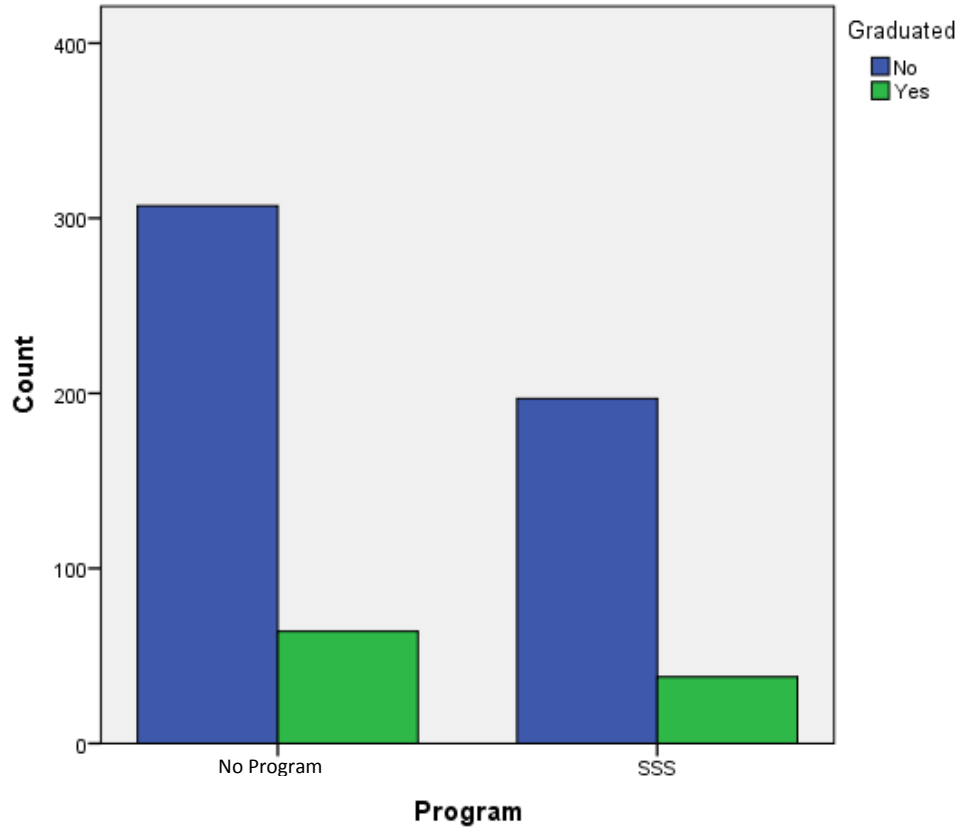
Figure 13. A Clustered Bar Chart of Degree Completion Within SSS and No program.

CHAPTER 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS FOR PRACTICE, AND

RECOMMENDATIONS FOR FURTHER RESEARCH

The purpose of this quantitative study was to determine if there were significant differences in the successes of those underrepresented students who participate in Student Support Services programs as opposed to those that participate in the Quest for Success program. Additionally the results from these two programs were compared to nonprogram participants who were also classified as underrepresented. The study analyzed archival data collected from East Tennessee State University's student database. Data were collected and compared for the 2008 – 2009, 2009 – 2010, 2010 – 2011, and 2011 – 2012 school years. This chapter is a final report of the research. Furthermore it is a summary of findings and conclusions, recommendations for practice, and recommendations for future research.

Summary of Findings

At the .05 level of significance, statistical differences were found in the benchmark variables (grade point averages, retention rates, and graduation rates) between Quest for Success, Student Support Services, and nonprogram participants. These finding support the historic, but widely referenced theories of Tinto (1975) who viewed colleges and universities as organizations composed of two interacting systems: an academic system and a social system. Because of the multi-year model used by Student Support Services it can be best described as a social system within an academic system.

Six research questions where explored and the findings are discussed in the following passages.

Research Question 1

Is there a significant difference in the grade point averages of those underrepresented students who participate in the Quest for Success Program, TRiO's Student Support Services, and nonprogram participants?

There were significant differences in the mean grade point averages for those underrepresented students within the three focus groups, Quest for Success, TRiO's Student Support Services, and nonprogram participants. The mean grade point average for those students receiving support from Student Support Service was significantly higher than the mean grade point averages of both Quest for Success and nonprogram participants. Additionally while the mean grade point averages were close for Quest for Success and nonprogram participants, the mean grade point average for nonprogram participants was higher than that of Quest for Success although this finding was not significant.

Research Question 2

Is there a significant difference between the high school grade point averages and college grade point averages?

There was a significant difference between high school grade point averages and college grade point averages for all three groups. College grade point averages were lower than high school grade point averages. Moreover, there was a significant correlation between the high

school grade point averages and college grade point averages, which indicated that students with better high school grade point averages tend to have better college grade point averages.

Research Question 3

Do the differences in college grade point averages among the three programs vary significantly as a function of high school grade point averages?

There was no significant difference in the interaction between high school grade point averages and program participation in regards to college grade point averages, although the results were close with a p value of .058. The main effect of each variable individually (high school grade point averages and program), however, was significant in regards to college grade point averages. These significant differences occurred when Student Support Services was compared to Quest for Success and when Student Support Services was compared to nonprogram participants. It is also worth noting the increase in mean college grade point average for those Student Support Services students who earned high school grade point averages less than 2.5.

Research Question 4

Do the differences in college grade point averages among the three programs vary significantly as a function of gender?

There was no significant difference in the interaction between gender and program participation in regards to college grade point averages. The main effect of each variable (gender and program), however, was significant in relationship to college grade point averages. These significant differences occurred during comparisons Student Support Services and Quest for

Success and when Student Support Services was compared to nonprogram participants. Additionally the gender main effect indicated that females tend to have significantly higher college grade point averages than males.

Research Question 5

Is there a significant difference in the freshman to sophomore retention rates of underrepresented students in relationship to their participation in outreach programs?

There were significant differences in the freshman to sophomore retention rates in relationship to program group. Follow-up pairwise comparisons concluded that these significant differences occurred when Student Support Services was compared to Quest for Success and when Student Support Services was compared to nonprogram participants. Therefore, it can be concluded that Student Support Services had significantly higher retention rates (.78) than both Quest for Success (.67) and nonprogram participants (.66).

Research Question 6

Is there a significant difference in the graduation rates of underrepresented students in relationship to their participation in outreach programs?

There were significant differences in the graduation rates of underrepresented students in relationship to program group. Follow-up pairwise comparisons indicated that these significant differences occurred when Student Support Services was compared to Quest for Success and also during the comparison of nonprogram participants and Quest for Success. There were no significant differences between the graduation rates of Student Support Services and nonprogram participants. Therefore, it can be concluded that students from both Student Support Services

(.16) and nonprogram participants (.17) have significantly higher graduation rates than students from Quest for Success (.07). These findings are based on a 4-year graduation rate although it is common practice to use a 6-year graduation rate. Four years was used to the lack of data prior to 2008.

<u>Conclusions</u>

Based on the responses to the six research questions in this study, programs designed for underrepresented students do provide significant differences in college success. Overall the results of the study revealed that students participating in the multi-year program, Student Support Services, had significantly higher grade point averages, student retention rates, and student graduation rates when compared to students who participated in Quest for Success (a 1-year incoming freshman program). When compared to nonprogram participants from underrepresented student populations, Student Support Services participants had significantly higher grade point averages and retention rates. Furthermore there were no significant differences found in comparisons between Quest for Success participants and nonprogram participants in terms of grade point averages and retention rates. Nonprogram participants did, however, have significantly higher graduation rates. While this does not suggest that underrepresented students do not benefit from the Quest for Success program, it is noteworthy because Quest participants and nonprogram participants were the most similar in terms of demographic backgrounds, especially ethnicities.

The results of these findings indicate that Student Support Services is a better program than Quest for Success. While analysis of future impact of neither the Quest for Success or Student Support Services have yet to be determined, many studies have indicated that outreach

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programs and educational attainment do benefit the student in terms of occupational, social, and economic status. Although there are various means to determine success, college completion is a common indicator for academic achievement (Pascarella & Terenzini, 2005). To that end, college environments are particularly important during the student's transition period from high school into college (Gurin et al., 2002; Hurtado et al., 2002; Jayakumar, 2008; Locks et al., 2008; Saenz, 2005) and also in subsequent years.

Research advises that different groups of students may need different types of academic and social support (Kuh et al., 2005). When considering the fact that education has not always been accessible to all, colleges and universities have become very instrumental in helping students build the confidence and self-esteem necessary for them to succeed (Gibson & Bruno, 2012).

<u>Recommendations for Practice</u>

1. Underrepresented students should be surveyed to understand what it is they are interested in gaining from the college experience and degree. Additional questions could be asked in regards to their level of preparedness.

2. The university should make an intentional effort to increase recruitment of high performing, diverse students. This may include providing a scholarship package or full tuition waiver. As a Predominately White Institution (PWI), East Tennessee State University, along with others, must be intentional in efforts to recruit a diverse student body and failure to do so will perpetuate the trend of a relatively homologous student body.

3. The university, rather than a department, should consider implementing additional mutli-year programs that will allow academic professionals additional contact with students. As

found in this study, the multi-year program seemed to work best; therefore, more effort and resources should be spent expanding on these types of models.

4. Help student transition in the whole college community. While there is value in developing a network of peers, knowledge base is strengthened by the diversity of views. Retention of students has to be an intentional act. Students like to feel they are a part of the group and the larger community cares about them specifically.

5. Partner or collaborate with other departments or programs on campus that have a record of success when it comes to student outreach.

6. Continue to collect and analyze data on students. With such a small population of underrepresented students on East Tennessee State University's campus ($< 6\%$), there should be a significant amount of data on each student.

7. Mentoring is including in future outreach initiatives. This is always a great element to have. Students usually attend college seeking direction and understanding.

It is recommended that both the Quest for Success program and Student Support Service continue to aid the student populations they have targeted. Student Support Services, when compared to the Quest for Success program, is doing significantly better in terms of helping students earn higher grade point average, remaining enrolled, and graduating. However there is room for improvement. Quest for Success, on the other hand, should continue to assess the program and consider collaborating with the more successful programs on campus. Quest for Success and Student Support Services are different in more ways than one. Student Support Services, for example, has been serving students for many years. Quest for Success is still in its development phase. To that end, administrators of the Quest for Success program may want to

borrow elements from the model that Student Support Services is using to improve the successes of the students or may want to consider what other Predominately White Institutions are doing to improve and build a core of successful underrepresented students.

<center>Recommendations for Further Research</center>

This study can be strengthened by researching additional studies and examining what other colleges and universities within and outside of the Tennessee Board Regents system are doing to improve the academic performance and successes of their underrepresented student populations. The results of this study can be used to help make improvement with both the Quest for Success program, TRiO's Student Support Services, and any other student outreach program with a similar mission of student success. This study provided literature and data collection from two programs designed to assist students in progression through college. The literature provided gives the reader an understanding of the challenges and obstacles students from underrepresented populations must overcome. The literature also discusses the effects educational attainment can have on a student. In this study, of the three groups analyzed, those within TRiO's Student Support Services had significantly higher mean grade point averages, retention rates, and graduation rates. A qualitative study can be done to determine what barriers and challenges, identified by Spellman (2007) are specific to the underrepresented students of East Tennessee State University. The barriers that Spellman identified can be divided into three categories: situational, institutional, and dispositional. Barriers resulting from one's circumstances in life at a given time are considered situational. Institutional barriers involve policies and practices that prevent, or make difficult, participation in activities or courses. Examples of this would include

the lack of financial assistance. Lastly dispositional barriers include the students' perceptions or attitudes about their ability to succeed. Examining the following could also expand this study:

1. Examining in greater detail the role that racial diversity plays in the demand for outreach programs at Predominately White Institutions.

2. Performing similar study at peer institutions (Qualitative or Quantitative).

3. Surveying students to gauge why they choose to participate in certain programs as opposed to others.

4. Performing a qualitative study could reveal greater understanding in regards to the challenges and barriers underrepresented students currently encounter.

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APPENDICES

APPENDIX A

IRB Permission to Conduct Research

East Tennessee State University

Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707
Phone: (423) 439-6053 Fax: (423) 439-6060

April 5, 2013

Derriell Springfield
Campus Box 70734
ETSU

Dear Mr. Springfield,

Thank you for recently submitting information regarding your proposed project "Collegiate Academic Enhancement Programs: Benefits of Multi-Year Programs Compared to One-Year Programs for Traditionally Underrepresented Students."

I have reviewed the information, which includes a completed Form 129.

The determination is that this proposed activity as described meets neither the FDA nor the DHHS definition of research involving human subjects. Therefore, it does not fall under the purview of the ETSU IRB.

IRB review and approval by East Tennessee State University is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are human subject research in which the organization is engaged, please submit a new request to the IRB for a determination.

Thank you for your commitment to excellence.

Sincerely,
Chris Ayres
Chair, ETSU IRB

Accredited Since December 2005

APPENDIX B

Quest for Success Demographics and GPAs

ID	SEM_YR	GENDER	ETHNICITY	COLLEGE GPA	HS_GPA
1	Fall 2011	F	Hispanic	3.20	3.741
2	Fall 2010	F	Black, not of Hispanic Origin	2.75	2.030
3	Fall 2011	F	Black, not of Hispanic Origin	2.38	2.620
4	Fall 2011	F	Black, not of Hispanic Origin	3.67	2.720
5	Fall 2010	F	Black, not of Hispanic Origin	3.24	2.860
6	Fall 2012	F		2.86	3.210
7	Fall 2012	F	Black, not of Hispanic Origin	1.08	2.830
8	Fall 2010	M	White, not of Hispanic Origin	2.26	2.870
9	Fall 2011	F	Black, not of Hispanic Origin	2.67	2.614
10	Fall 2011	M	Black, not of Hispanic Origin	3.20	3.370
11	Fall 2010	M		2.42	2.292
12	Fall 2011	M	Black, not of Hispanic Origin	2.55	2.310
13	Fall 2012	F	Black, not of Hispanic Origin	2.00	2.620
14	Fall 2011	F	Black, not of Hispanic Origin	1.50	2.750
15	Fall 2011	M	Black, not of Hispanic Origin	3.64	2.960
16	Fall 2012	F	Black, not of Hispanic Origin	3.58	3.270
17	Fall 2010	M	Black, not of Hispanic Origin	1.35	2.880
18	Fall 2012	F	Black, not of Hispanic Origin	.68	2.220
19	Fall 2012	M	Black, not of Hispanic Origin	.25	2.430
20	Fall 2011	F	White, not of Hispanic Origin	3.35	2.920
21	Fall 2011	M	White, not of Hispanic Origin	3.18	3.540
22	Fall 2011	M		1.18	2.440
23	Fall 2009	M	Black, not of Hispanic Origin	1.10	1.920
24	Fall 2010	F	Black, not of Hispanic Origin	2.16	2.390
25	Fall 2011	F	White, not of Hispanic Origin	2.88	2.965
26	Fall 2011	F	Black, not of Hispanic Origin	2.65	3.080
27	Fall 2012	M	Black, not of Hispanic Origin	2.35	3.500
28	Fall 2011	F	Black, not of Hispanic Origin	2.40	3.230
29	Fall 2009	M	Black, not of Hispanic Origin	2.33	3.210
30	Fall 2010	F		2.94	3.560
31	Fall 2012	F		.07	3.310
32	Fall 2012	F	Black, not of Hispanic Origin	1.31	2.440
33	Fall 2011	F	Black, not of Hispanic Origin	2.28	2.926
34	Fall 2010	F		1.26	2.420
35	Fall 2008	F	Black, not of Hispanic Origin	2.94	2.670
36	Fall 2012	M	Black, not of Hispanic Origin	3.76	3.120
37	Fall 2012	M	Black, not of Hispanic Origin	1.08	2.430
38	Fall 2010	F		1.91	2.400

39	Fall 2012	M	Black, not of Hispanic Origin	3.36	3.960
40	Fall 2010	M		.94	2.890
41	Fall 2010	F		2.72	3.020
42	Fall 2011	F		1.35	2.800
43	Fall 2010	F		1.68	3.070
44	Fall 2012	M		.69	2.730
45	Fall 2012	F		1.85	3.810
46	Fall 2008	F	Black, not of Hispanic Origin	.81	2.594
47	Fall 2011	M	Black, not of Hispanic Origin	.71	2.600
48	Fall 2010	M	Black, not of Hispanic Origin	2.02	2.690
49	Fall 2012	F	Black, not of Hispanic Origin	1.96	3.280
50	Fall 2012	M	Black, not of Hispanic Origin	3.26	3.160
51	Fall 2010	F	Black, not of Hispanic Origin	2.68	2.490
52	Fall 2010	F	Black, not of Hispanic Origin	2.32	2.910
53	Fall 2010	F	Black, not of Hispanic Origin	1.46	2.980
54	Fall 2011	M	Black, not of Hispanic Origin	1.65	2.860
55	Fall 2010	M	Black, not of Hispanic Origin	3.40	3.410
56	Fall 2010	M	Black, not of Hispanic Origin	1.55	2.410
57	Fall 2010	F	Black, not of Hispanic Origin	1.26	2.391
58	Fall 2012	F	Black, not of Hispanic Origin	3.63	2.450
59	Fall 2008	F	Black, not of Hispanic Origin	3.06	3.400
60	Fall 2010	F		2.50	3.100
61	Fall 2012	F	Black, not of Hispanic Origin	3.06	2.320
62	Fall 2011	F	Black, not of Hispanic Origin	.94	3.180
63	Fall 2010	F		2.33	2.290
64	Fall 2010	F		3.46	3.290
65	Fall 2011	F	Not Specified	2.74	3.407
66	Fall 2011	M	Hispanic	1.40	2.720
67	Fall 2010	F	Black, not of Hispanic Origin	3.03	3.260
68	Fall 2011	F	Black, not of Hispanic Origin	3.02	3.139
69	Fall 2012	F	Black, not of Hispanic Origin	3.00	3.540
70	Fall 2010	F	Black, not of Hispanic Origin	2.54	2.820
71	Fall 2010	F	Black, not of Hispanic Origin	.83	2.250
72	Fall 2011	M		1.53	2.592
73	Fall 2012	M	Hispanic	2.00	3.100
74	Fall 2011	F	Black, not of Hispanic Origin	1.51	3.070
75	Fall 2012	M		2.01	3.090
76	Fall 2012	F	Black, not of Hispanic Origin	3.67	3.000
77	Fall 2012	M	Black, not of Hispanic Origin	.33	2.470
78	Fall 2010	M	White, not of Hispanic Origin	3.87	3.940
79	Fall 2012	F	Black, not of Hispanic Origin	2.25	3.350
80	Fall 2012	F	Black, not of Hispanic Origin	1.93	3.000
81	Fall 2009	M	Hispanic	1.95	2.470
82	Fall 2009	F	Black, not of Hispanic Origin	2.11	2.686

83	Fall 2012	M	Black, not of Hispanic Origin	3.32	3.550
84	Fall 2009	F	Black, not of Hispanic Origin	2.93	2.333
85	Fall 2012	M	Not Specified	2.65	2.560
86	Fall 2012	F	Black, not of Hispanic Origin	.25	2.960
87	Fall 2010	M	Black, not of Hispanic Origin	.70	2.460
88	Fall 2009	M	Black, not of Hispanic Origin	1.89	2.567
89	Fall 2011	F	Black, not of Hispanic Origin	2.18	2.970
90	Fall 2011	F	White, not of Hispanic Origin	2.75	3.460
91	Fall 2012	F	Black, not of Hispanic Origin	1.82	3.090
92	Fall 2010	F		1.50	2.550
93	Fall 2012	F	Black, not of Hispanic Origin	2.00	2.450
94	Fall 2011	F	Black, not of Hispanic Origin	3.80	3.650
95	Fall 2009	F	Black, not of Hispanic Origin	2.15	2.298
96	Fall 2010	M		2.00	2.927
97	Fall 2009	M	Black, not of Hispanic Origin	1.49	2.903
98	Fall 2009	F	Black, not of Hispanic Origin	1.90	2.280
99	Fall 2010	M	Black, not of Hispanic Origin	1.84	3.150
100	Fall 2010	F	White, not of Hispanic Origin	2.30	2.810
101	Fall 2010	M	Black, not of Hispanic Origin	3.33	3.120
102	Fall 2008	F	Black, not of Hispanic Origin	3.32	2.300
103	Fall 2011	F	Black, not of Hispanic Origin	2.48	3.270
104	Fall 2012	M		1.83	3.060
105	Fall 2010	M		1.40	2.700
106	Fall 2009	M	Black, not of Hispanic Origin	2.03	1.980
107	Fall 2011	F	Black, not of Hispanic Origin	1.88	2.420
108	Fall 2011	M	White, not of Hispanic Origin	2.11	3.690
109	Fall 2010	F	Black, not of Hispanic Origin	1.68	2.230
110	Fall 2010	F	Black, not of Hispanic Origin	2.10	2.810
111	Fall 2010	F	Black, not of Hispanic Origin	2.20	2.340
112	Fall 2010	F	White, not of Hispanic Origin	2.29	3.670
113	Fall 2010	F	Hispanic	3.06	3.466
114	Fall 2010	F		2.88	3.460
115	Fall 2011	M	Black, not of Hispanic Origin	2.64	3.240
116	Fall 2011	M	Black, not of Hispanic Origin	1.65	1.750
117	Fall 2009	F	Asian or Pacific Islander	2.80	3.750
118	Fall 2011	F	Black, not of Hispanic Origin	1.06	2.940
119	Fall 2011	F		1.84	2.940
120	Fall 2011	M		3.06	3.260
121	Fall 2011	F	Black, not of Hispanic Origin	1.45	2.440
122	Fall 2009	M	Black, not of Hispanic Origin	2.32	2.602
123	Fall 2009	M	Black, not of Hispanic Origin	1.35	2.220
124	Fall 2011	F	Black, not of Hispanic Origin	2.81	2.882
125	Fall 2009	M	Black, not of Hispanic Origin	2.55	2.600

APPENDIX C

Student Support Services Demographics and GPAs

ID	SEM_YR	GENDER	ETHNICITY	COLLEGE GPA	HS_GPA
126	Fall 2008	F	White, not of Hispanic Origin	1.92	3.330
127	Fall 2008	M	White, not of Hispanic Origin	.96	2.970
128	Fall 2009	M	White, not of Hispanic Origin	3.73	3.750
129	Spring 2010	M	White, not of Hispanic Origin	2.74	2.660
130	Fall 2008	M	White, not of Hispanic Origin	1.47	3.150
131	Fall 2009	F	White, not of Hispanic Origin	3.07	3.380
132	Fall 2009	M	White, not of Hispanic Origin	2.95	3.293
133	Fall 2011	F	Black, not of Hispanic Origin	3.32	3.760
134	Fall 2008	F	White, not of Hispanic Origin	3.41	3.810
135	Fall 2008	M	White, not of Hispanic Origin	1.26	2.890
136	Fall 2008	F	White, not of Hispanic Origin	3.54	3.920
137	Fall 2008	M	White, not of Hispanic Origin	2.53	2.310
138	Fall 2008	M	White, not of Hispanic Origin	.46	3.015
139	Spring 2011	M	White, not of Hispanic Origin	2.56	2.340
140	Fall 2010	F	White, not of Hispanic Origin	3.70	3.840
141	Fall 2009	F	Not Specified	3.63	3.530
142	Fall 2009	M	White, not of Hispanic Origin	3.08	5.700
143	Fall 2010	F	White, not of Hispanic Origin	1.33	3.138
144	Fall 2010	F	White, not of Hispanic Origin	3.24	3.484
145	Spring 2008	F	Black, not of Hispanic Origin	.61	2.460
146	Fall 2008	F	White, not of Hispanic Origin	2.10	2.875
147	Fall 2010	M	White, not of Hispanic Origin	1.10	3.080
148	Fall 2011	F	White, not of Hispanic Origin	3.11	3.680
149	Fall 2008	M	White, not of Hispanic Origin	2.33	3.300
150	Fall 2009	F	Black, not of Hispanic Origin	3.18	3.840
151	Summer 2012	M		.90	2.890
152	Fall 2008	F	Asian or Pacific Islander	3.30	3.000
153	Fall 2011	M	White, not of Hispanic Origin	2.65	3.000
154	Fall 2011	M	White, not of Hispanic Origin	3.50	3.890
155	Fall 2008	F	White, not of Hispanic Origin	2.44	3.480
156	Fall 2010	F	White, not of Hispanic Origin	3.63	3.830
157	Fall 2009	F	White, not of Hispanic Origin	3.30	3.800
158	Fall 2011	F	White, not of Hispanic Origin	2.73	3.580
159	Fall 2009	M	White, not of Hispanic Origin	3.46	3.270
160	Fall 2008	F	White, not of Hispanic Origin	2.88	2.710
161	Fall 2010	F	White, not of Hispanic Origin	2.50	2.635
162	Fall 2009	M	Not Specified	3.65	2.880

163	Fall 2008	F	White, not of Hispanic Origin	2.87	2.590
164	Spring 2003	F	White, not of Hispanic Origin	3.20	3.940
165	Fall 2011	F	Black, not of Hispanic Origin	2.40	2.790
166	Fall 2010	F	Black, not of Hispanic Origin	3.83	3.180
167	Fall 2010	F	White, not of Hispanic Origin	2.83	2.980
168	Fall 2010	F	Black, not of Hispanic Origin	1.64	3.580
169	Fall 2011	F	White, not of Hispanic Origin	3.06	3.590
170	Fall 2008	F	White, not of Hispanic Origin	3.11	3.790
171	Fall 2010	F	White, not of Hispanic Origin	2.08	3.333
172	Fall 2010	F	White, not of Hispanic Origin	3.92	3.833
173	Fall 2010	M	White, not of Hispanic Origin	2.00	3.200
174	Fall 2009	F	White, not of Hispanic Origin	2.63	2.930
175	Fall 2008	F	White, not of Hispanic Origin	3.42	3.917
176	Fall 2010	F	White, not of Hispanic Origin	2.82	3.480
177	Spring 2009	F	White, not of Hispanic Origin	2.22	2.520
178	Fall 2010	F	White, not of Hispanic Origin	2.88	3.630
179	Fall 2010	M		2.44	3.242
180	Fall 2009	F	White, not of Hispanic Origin	3.24	3.759
181	Fall 2009	F	White, not of Hispanic Origin	3.97	4.000
182	Fall 2009	M	White, not of Hispanic Origin	3.57	3.130
183	Fall 2010	F	White, not of Hispanic Origin	3.55	4.000
184	Fall 2009	F	White, not of Hispanic Origin	2.74	5.300
185	Fall 2011	F	White, not of Hispanic Origin	1.42	3.630
186	Summer 2009	F	White, not of Hispanic Origin	3.27	2.300
187	Fall 2010	F	White, not of Hispanic Origin	1.72	3.562
188	Summer 2009	M	White, not of Hispanic Origin	3.20	1.230
189	Fall 2011	F	White, not of Hispanic Origin	3.70	4.000
190	Fall 2009	F	White, not of Hispanic Origin	2.77	3.830
191	Fall 2008	M	White, not of Hispanic Origin	3.86	4.440
192	Fall 2011	M	White, not of Hispanic Origin	1.03	3.119
193	Fall 2009	F	White, not of Hispanic Origin	4.00	6.320
194	Fall 2011	F	White, not of Hispanic Origin	3.17	3.610
195	Fall 2010	F	White, not of Hispanic Origin	2.53	3.250
196	Fall 2011	F	White, not of Hispanic Origin	3.70	3.948
197	Fall 2008	F	White, not of Hispanic Origin	3.68	3.920
198	Fall 2011	F	White, not of Hispanic Origin	3.30	3.550
199	Fall 2009	M	White, not of Hispanic Origin	2.35	3.070
200	Fall 2010	M	White, not of Hispanic Origin	2.83	3.460
201	Fall 2008	F	White, not of Hispanic Origin	1.05	3.080
202	Fall 2011	F	White, not of Hispanic Origin	3.97	3.880
203	Fall 2011	F	White, not of Hispanic Origin	3.25	3.540
204	Fall 2010	F	Asian or Pacific Islander	2.28	3.020
205	Fall 2008	F	White, not of Hispanic Origin	3.38	3.080
206	Fall 2011	F	White, not of Hispanic Origin	.88	3.094

207	Fall 2008	M	White, not of Hispanic Origin	3.80	3.830
208	Fall 2009	M	White, not of Hispanic Origin	3.17	3.196
209	Fall 2011	M	White, not of Hispanic Origin	2.84	3.720
210	Fall 2008	M	White, not of Hispanic Origin	2.90	3.380
211	Fall 2008	F	Black, not of Hispanic Origin	2.17	2.780
212	Fall 2010	F	White, not of Hispanic Origin	3.32	3.200
213	Fall 2009	M	White, not of Hispanic Origin	2.59	6.380
214	Fall 2011	F	White, not of Hispanic Origin	2.44	3.520
215	Fall 2008	M	White, not of Hispanic Origin	2.87	3.280
216	Fall 2009	F	White, not of Hispanic Origin	1.95	3.970
217	Fall 2009	F	White, not of Hispanic Origin	3.56	3.600
218	Fall 2009	F	White, not of Hispanic Origin	3.61	4.000
219	Fall 2009	M	White, not of Hispanic Origin	1.12	3.397
220	Fall 2010	F	White, not of Hispanic Origin	2.46	3.330
221	Fall 2009	F	White, not of Hispanic Origin	2.46	3.770
222	Fall 2009	F	White, not of Hispanic Origin	2.71	3.357
223	Fall 2011	M	White, not of Hispanic Origin	2.85	3.300
224	Spring 2011	M	White, not of Hispanic Origin	3.33	3.340
225	Fall 2011	F	White, not of Hispanic Origin	2.76	3.900
226	Fall 2010	F		2.80	3.341
227	Fall 2011	F	White, not of Hispanic Origin	3.01	3.470
228	Summer 2010	F	White, not of Hispanic Origin	2.94	1.763
229	Fall 2009	M	White, not of Hispanic Origin	3.36	3.647
230	Fall 2008	M	White, not of Hispanic Origin	3.16	3.340
231	Fall 2009	F	White, not of Hispanic Origin	1.01	3.394
232	Fall 2008	F	White, not of Hispanic Origin	3.30	3.179
233	Fall 2008	M	White, not of Hispanic Origin	2.74	3.010
234	Fall 2009	F	White, not of Hispanic Origin	2.56	2.390
235	Fall 2011	F	White, not of Hispanic Origin	1.29	3.480
236	Fall 2009	F	White, not of Hispanic Origin	2.96	3.250
237	Fall 2008	F	White, not of Hispanic Origin	3.24	3.540
238	Spring 2009	M	White, not of Hispanic Origin	2.90	2.490
239	Fall 2009	F	White, not of Hispanic Origin	.60	3.140
240	Fall 2010	F		3.35	3.470
241	Fall 2008	F	White, not of Hispanic Origin	3.52	4.185
242	Fall 2010	F	White, not of Hispanic Origin	3.52	4.000
243	Fall 2011	M	White, not of Hispanic Origin	1.91	2.810
244	Spring 2010	M	White, not of Hispanic Origin	2.59	2.864
245	Fall 2011	F	White, not of Hispanic Origin	2.76	3.780
246	Fall 2009	F	White, not of Hispanic Origin	3.53	2.100
247	Fall 2011	F	White, not of Hispanic Origin	3.84	3.740
248	Fall 2009	F	White, not of Hispanic Origin	2.93	3.960
249	Fall 2009	F	White, not of Hispanic Origin	3.47	3.670
250	Fall 2011	M	White, not of Hispanic Origin	.90	2.810

APPENDIX D

Nonprogram Participants Demographics and GPAs

ID	SEM_YR	GENDER	ETHNICITY	COLLEGE GPA	HS_GPA
251	Fall 2012	M	Asian or Pacific Islander	1.96	3.240
252	Fall 2009	F	Black, not of Hispanic Origin	2.59	3.206
253	Fall 2012	F	Hispanic	3.67	3.530
254	Fall 2010	F	Black, not of Hispanic Origin	1.01	2.200
255	Fall 2008	M	Black, not of Hispanic Origin	2.11	2.660
256	Fall 2008	M	Black, not of Hispanic Origin	1.68	1.850
257	Fall 2008	M	Black, not of Hispanic Origin	1.28	2.256
258	Fall 2012	M	Black, not of Hispanic Origin	2.75	2.420
259	Fall 2008	M	American Indian	.98	3.420
260	Fall 2010	M	Asian or Pacific Islander	3.00	3.571
261	Fall 2008	F	Asian or Pacific Islander	2.70	3.550
262	Fall 2011	M	Hispanic	2.33	3.050
263	Fall 2012	F	Asian or Pacific Islander	3.11	3.630
264	Fall 2010	M	Black, not of Hispanic Origin	3.61	3.710
265	Fall 2012	M	Black, not of Hispanic Origin	3.22	3.100
266	Fall 2008	M	Black, not of Hispanic Origin	2.04	5.300
267	Fall 2011	F	Black, not of Hispanic Origin	1.62	3.100
268	Fall 2011	M	Asian or Pacific Islander	2.17	3.031
269	Fall 2011	F	Black, not of Hispanic Origin	.17	2.230
270	Fall 2011	F	Hispanic	2.90	3.670
271	Fall 2008	M	Asian or Pacific Islander	3.31	3.860
272	Fall 2011	F	Black, not of Hispanic Origin	1.28	2.400
273	Fall 2008	F	Black, not of Hispanic Origin	1.73	2.375
274	Fall 2008	F	Black, not of Hispanic Origin	3.78	3.944
275	Fall 2012	M	Black, not of Hispanic Origin	3.71	4.000
276	Fall 2009	M	Hispanic	2.97	3.240
277	Fall 2011	M	Hispanic	2.27	3.290
278	Fall 2011	M	Black, not of Hispanic Origin	1.46	2.420
279	Fall 2010	M	Asian or Pacific Islander	.47	2.703
280	Fall 2012	M	Black, not of Hispanic Origin	2.18	2.810
281	Fall 2012	M	American Indian	1.46	3.380
282	Fall 2009	M	Black, not of Hispanic Origin	1.47	2.871
283	Fall 2012	F	Asian or Pacific Islander	1.96	3.130
284	Fall 2011	M	Black, not of Hispanic Origin	1.03	2.390
285	Fall 2008	F	Hispanic	3.06	3.690
286	Fall 2012	F	Black, not of Hispanic Origin	1.93	2.320
287	Fall 2012	F	Hispanic	3.38	2.270

288	Fall 2012	F	Black, not of Hispanic Origin	3.40	2.776
289	Fall 2008	M	Black, not of Hispanic Origin	2.39	2.930
290	Fall 2010	F	Black, not of Hispanic Origin	.80	2.400
291	Fall 2008	F	Asian or Pacific Islander	3.23	4.306
292	Fall 2012	M	Hispanic	2.25	3.000
293	Fall 2011	F	Black, not of Hispanic Origin	1.23	3.400
294	Fall 2008	F	American Indian	.46	3.250
295	Fall 2010	M	Hispanic	2.65	3.270
296	Fall 2011	F	Black, not of Hispanic Origin	2.64	3.460
297	Fall 2011	F	Black, not of Hispanic Origin	2.52	3.540
298	Fall 2012	F	Black, not of Hispanic Origin	2.73	3.220
299	Fall 2010	F	Black, not of Hispanic Origin	1.95	2.440
300	Fall 2012	M	Black, not of Hispanic Origin	2.01	3.000
301	Fall 2010	M	Black, not of Hispanic Origin	.44	2.140
302	Fall 2010	F	Black, not of Hispanic Origin	2.69	2.550
303	Fall 2012	F	Black, not of Hispanic Origin	2.35	2.290
304	Fall 2008	M	Black, not of Hispanic Origin	2.64	2.530
305	Fall 2012	M	Black, not of Hispanic Origin	1.74	3.670
306	Fall 2008	F	Black, not of Hispanic Origin	2.62	2.730
307	Fall 2010	F	Asian or Pacific Islander	3.31	3.421
308	Fall 2012	F	Black, not of Hispanic Origin	1.35	3.250
309	Fall 2011	M	Black, not of Hispanic Origin	.54	2.580
310	Fall 2008	F	Black, not of Hispanic Origin	2.53	2.770
311	Fall 2009	F	Asian or Pacific Islander	2.27	2.580
312	Fall 2010	M	Black, not of Hispanic Origin	3.12	2.613
313	Fall 2009	M	Asian or Pacific Islander	3.49	3.333
314	Fall 2008	M	Hispanic	2.92	2.660
315	Fall 2011	M	Hispanic	1.33	2.070
316	Fall 2009	M	Black, not of Hispanic Origin	1.28	3.010
317	Fall 2009	M	Hispanic	2.44	3.590
318	Fall 2009	F	Hispanic	2.37	3.414
319	Fall 2010	F	Black, not of Hispanic Origin	3.30	2.610
320	Fall 2010	M	Black, not of Hispanic Origin	1.76	2.640
321	Fall 2011	F	Black, not of Hispanic Origin	2.89	3.510
322	Fall 2008	M	Hispanic	3.17	3.250
323	Fall 2009	F	Black, not of Hispanic Origin	1.89	2.100
324	Fall 2012	F	Black, not of Hispanic Origin	2.94	3.710
325	Fall 2012	M	Black, not of Hispanic Origin	.83	2.670
326	Fall 2011	F	Black, not of Hispanic Origin	3.21	4.000
327	Fall 2008	F	Hispanic	3.57	3.320
328	Fall 2008	F	Black, not of Hispanic Origin	3.17	3.400
329	Fall 2008	M	Asian or Pacific Islander	3.55	3.800
330	Fall 2008	F	Black, not of Hispanic Origin	1.75	3.310
331	Fall 2009	M	Black, not of Hispanic Origin	1.87	3.033

332	Fall 2008	M	Black, not of Hispanic Origin	3.11	2.870
333	Fall 2010	M	Asian or Pacific Islander	2.21	3.070
334	Fall 2010	F	Black, not of Hispanic Origin	1.25	2.242
335	Fall 2012	M	Black, not of Hispanic Origin	2.13	2.390
336	Fall 2011	M	Black, not of Hispanic Origin	2.15	2.920
337	Fall 2012	F	Black, not of Hispanic Origin	2.58	3.870
338	Fall 2010	F	Black, not of Hispanic Origin	3.35	3.100
339	Fall 2010	F	Black, not of Hispanic Origin	2.00	2.639
340	Fall 2012	M	Black, not of Hispanic Origin	3.08	2.940
341	Fall 2012	M	Hispanic	2.17	3.070
342	Fall 2008	F	Black, not of Hispanic Origin	2.41	3.000
343	Fall 2009	F	Hispanic	2.25	2.595
344	Fall 2010	F	Black, not of Hispanic Origin	1.24	3.084
345	Fall 2012	M	Asian or Pacific Islander	3.94	3.980
346	Fall 2008	F	Asian or Pacific Islander	3.29	4.280
347	Fall 2011	M	Black, not of Hispanic Origin	1.77	2.390
348	Fall 2009	F	Black, not of Hispanic Origin	3.07	2.620
349	Fall 2009	F	Asian or Pacific Islander	3.65	3.944
350	Fall 2010	M	Black, not of Hispanic Origin	.38	2.150
351	Fall 2012	F	American Indian	4.00	3.980
352	Fall 2010	F	Black, not of Hispanic Origin	3.20	3.390
353	Fall 2010	F	Black, not of Hispanic Origin	3.49	2.980
354	Fall 2011	F	Black, not of Hispanic Origin	2.03	2.450
355	Fall 2009	M	Hispanic	2.26	2.380
356	Fall 2012	M	Black, not of Hispanic Origin	2.05	2.860
357	Fall 2011	M	Black, not of Hispanic Origin	1.67	2.630
358	Fall 2011	F	Hispanic	3.72	3.740
359	Fall 2008	M	Black, not of Hispanic Origin	2.61	2.050
360	Fall 2008	M	Black, not of Hispanic Origin	.88	2.670
361	Fall 2008	F	Hispanic	3.04	3.470
362	Fall 2010	F	Black, not of Hispanic Origin	1.47	2.560
363	Fall 2009	F	Hispanic	.64	2.828
364	Fall 2012	M	Asian or Pacific Islander	3.27	3.620
365	Fall 2011	M	Black, not of Hispanic Origin	1.76	2.380
366	Fall 2008	M	Black, not of Hispanic Origin	2.32	2.530
367	Fall 2010	F	American Indian	2.78	3.550
368	Fall 2011	F	Black, not of Hispanic Origin	3.03	3.800
369	Fall 2011	F	Black, not of Hispanic Origin	2.92	3.600
370	Fall 2009	F	Black, not of Hispanic Origin	2.13	2.250
371	Fall 2008	F	Asian or Pacific Islander	3.78	3.750
372	Fall 2011	F	American Indian	2.73	3.280
373	Fall 2011	F	Black, not of Hispanic Origin	2.61	1.750
374	Fall 2008	F	Black, not of Hispanic Origin	1.72	3.200
375	Fall 2012	F	Black, not of Hispanic Origin	1.87	2.270

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