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The Relationship of Perceived Intellectual and Social Attainment to Academic Success of First-Generation, First-Year College Students Participating in a First Generation Access Program

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The Relationship of Perceived Intellectual and Social Attainment to Academic Success of First-Generation, First-Year College Students Participating in a First Generation Access Program

by

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DEDICATION

I dedicate my dissertation to the love of my life, my husband Dwayne D. Bergeron. We rekindled our childhood love at the beginning of this journey. You have been my pillar of support and my rock throughout this process. Thank you for being my shoulder to cry on, motivation when I wanted to give up, holding my hand to calm my spirit as I talked in my sleep about my dissertation, and for preparing delicious cuisine for those long intense writing weekends and "Dissertation Happy Hours." Most of all, thank you for believing in me and loving me unconditionally. I admire your compassion for others, quick wit, many skills and talents, intellectual tenacity and wonderful interpersonal skills. You are truly a Renaissance man and a survivor. Thank you for choosing me to be your life partner. My completion of this journey represents the trait that I adore most about you, resilience. God has truly blessed this union! I love you Bae! Chef Bergeron…Cheers to you on the success of "Our" dissertation!

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ABSTRACT

The purpose of this study was to advance understanding of perceived intellectual and social attainment gains of first-generation, first-year college students participating in First Generation Access Programs at the University of South Florida (USF), a large, public research university in Florida. Understanding the self-reported intellectual and personal/social gains of these students in higher education can lead to higher retention rates, creative strategies that promote academic success, affective cognitive and personal development activities and services that meet the needs of this rapidly growing at-risk student population with their persistence and transition to college.

Researchers have sought to examine variables that may help to increase the persistence rates of students by understanding the impact of students enrolled in First Generation Access Programs on first-generation students' academic success, as measured by grade point average. Several studies have indicated that first-generation, first-year college students have pre-collegiate characteristics that impede their intellectual and personal/social growth. In addition, research studies show that First Generation Access Programs are successful in assisting at-risk student populations successful in their transition to and persistence in college. However, there is scarcity of literature that examines the estimates of intellectual and personal/social gains of first-generation, first-year students enrolled in First Generation Access Programs. As such, this study explored the extent to which self-reported intellectual and personal/social gains predict the

academic success, as measured by grade point average, for first-generation, first-year college students enrolled in First Generation Access Programs.

Theoretical frameworks from higher education were used to provide an understanding of perceived intellectual and personal/social attainment and academic success of first-generation, first-year, students enrolled in First Generation Access Programs for the context of this study. According to Kuh (1995), college impact models from Astin and Tinto and Pusser were studied, as they have been used to assist higher education professionals in understanding "outcomes produced by interactions between students and their institutions' environments…" (p. 126 – 127). In the context of both college impact models, Astin's Inputs-Environment-Outcomes Model (1991) and Tinto and Pusser's Model of Institutional Action for Student Success (2006), results of this study indicated that First Generation Access Programs increase the intellectual and personal/social attainment of first-generation, first-year students.

Several statistical analyses were conducted to examine relationships between variables (self-reported intellectual and personal/social gains, gender, and academic success) including multivariate analysis of variance (MANOVA), simple regression tests, and Pearson Product Moment Correlation. Results of this study were based on the responses of 184 participants. Results indicated that the participants self-reported significant intellectual and personal/social gains. However, findings indicated that there is no statistically significant relationship between self-reported gains and academic success as measured by grade point average, but there is a statistically significant relationship based on gender.

One implication for higher education administrators and student affairs professionals is the need to investigate alternative measures for academic success of first-generation, first-year students enrolled in First Generation Access Programs. Grade point average does not seem to accurately measure academic success on perceived intellectual and personal/social gains of this at-risk population. Second, institutions should seek to understand the factors and specific strategies of First Generation Access Programs that increase the cognitive and social growth and development of first-generation, first-year college students so that it may be successfully implemented for first-generation, first-year college students who do not participate in FGAP.

CHAPTER ONE

INTRODUCTION TO THE STUDY

Higher Education is often viewed as the gateway to the American dream, the eminent social equalizer (Leonhardt, 2005; Van Galen, 2000). According to Thelin (2004), institutions of American higher education sought to educate students in various subject areas to develop them into competent leaders in the nation. However, for a long time, the students who received an education from these institutions were not diverse by way of social class, gender, culture, or curriculum. Educators of the colonial period believed the quality of an undergraduate education must produce responsible leaders who were comprised of a majority of White males from wealthy families (London, 2000; Thelin, 2004). As a result of American Independence in 1776, American higher education began to move away from the philosophies of the English. The New Nation Period (referred to historical period when the United States of America, as an independent nation, developed a financial program that stimulated the Nations' economy and the formed the first two political parties that empowered minority populations) began and funds became available to provide financial aid for students. Subsequently, colleges and seminaries for females were formed and the onset of those institutions influenced the founding of coeducation and Black colleges.

Due to multiple shifts in the economy, higher education became more accessible to more diverse populations, causing a huge influx of college attendees from 1880 to

1914. Therefore, there was a need to adjust to the diversity and growing numbers of the college student population. The diversity of students and number of students continued to expand from 1915 to 1990. Due to unemployment during the Great Depression from 1929 – 1941, the Serviceman's Readjustment Act - G. I. Bill in 1944, the Truman Commission Report of 1947, the Brown v. Board of Education United States Supreme Court decision in 1954, the Civil Rights Act of 1964, The Higher Education Act of 1965, Basic Educational Opportunity Grants in 1972, and the American with Disabilities Act of 1990, higher education became accessible and more affordable to veterans, women, ethnic minorities, the handicapped, and mid to low-income students (Millard, 1991;Robert & Thompson, 1994; Thelin, 2004;Vaughan, 1992). The preceding list of endeavors was presumed to be incentives that would make higher education more accessible for all students who desired to attend.

In the beginning of the 21st century, a more open access system evolved which opened the doors to institutions of higher learning for first-generation college students (FGS) (Trow, 2001; US Department of Education, 2008a). London (1996) referred to FGS as "educational pioneers" (p.11) and are further classified as students whose parents have no formal education beyond high school (Berkner & Choy, 2008; Choy, 2001; Engle, Bermeo, & O'Brien, 2006; HEA, 1965, Warburton, Bugarin, & Nunez, 2001). Educational goals are due not only to the accomplishments of parents, but also of teachers and educational mentors who convey the significance of attending college (Venezia, Kirst, & Antonio, 2003). Thus, first-generation students represent between 25% and 50% of all college students (Berkner & Choy, 2008; Pascarella, Pierson, Wolniak, & Terenzini, 2004). Several studies indicated that first-generation students

represent up to 47% of the students enrolled in community colleges and four-year institutions (Chen & Carroll, 2005; Choy, 2001; Engle et al, 2006; Horwedel, 2008). With this in mind, FGS are a significant proportion of students enrolled in institutions of higher learning.

Many first-generation students face myriad challenges associated with access to higher education, and they have deficits compared to non-first-generation college students (DeAngelo, 2010; Engle et al., 2006; Lohfink & Paulsen, 2005; Swail, Cabrera, & Lee, 2005). Pascarella et al. (2004) wrote:

> First-generation students are more likely to leave a four-year institution at the end of the first year, less likely to remain enrolled in a four-year institution or be on a persistence track to a bachelor's degree after three years and are less likely to stay enrolled or attain a bachelor's degree after five years (p. 250).

Although many first-generation students are well-prepared for colleges and universities, they are still over represented in populations of students who are not prepared for higher education. Compared to traditional college students, many FGS are academically ill-prepared and economically disadvantaged, face cultural barriers, and have a scarcity of social networks (Kuh, Cruce, Kinzie, & Gonyea, 2008; Longwell-Grice & Longwell-Grice, 2008). FGS are more likely to be from an ethnic minority group or low-income family and find adjustment to college more difficult than students from middle to high-income backgrounds (Marx, 2006). Despite the challenges faced by this population of students, they enroll in college and universities with the understanding that post-secondary education might be a catalyst for a better future (London, 2000). With this in mind, higher education is considered to be relatively unchartered territory for first-

generation students who aspire to attain a college degree. Therefore, it is important to assist FGS at the beginning of their entry to college to achieve the greatest gains in persistence rates.

The challenges that first-generation students endure hinder their ability to compete with their peers intellectually, financially, and socially. Therefore, FGS enter the world of academia with significant challenges that are different than the challenges faced by their peers. These deficits impede the intellectual and personal/social growth of FGS.

President Lyndon Johnson's "War on Poverty," served as a catalyst to creating legislation such as the Educational Opportunity Act of 1964 and the Higher Education Act of 1965, which established programs to help first-generation, low-income students, and veterans prepare for education at colleges and universities. To further assist first-generation and low-income students, the reauthorization of the Higher Education Act of 1965 instituted Summer Bridge Programs to assist first-generation students to persist in their educational endeavors at institutions of higher learning (Callan, as cited in Heller, 2001, Green, 2006). The objectives of the Summer Bridge Programs, referred to as First Generation Access Programs (FGAPs) in the proposed study, are to assist incoming first-generation students who do not meet the university's current criteria for admission and to aid transition from high school to college in the summer before they start their college career.

Research on student persistence revealed that First Generation Access Programs have demonstrated proficiency in dealing with academic readiness and social adjustment issues faced by FGS (Gandara, 2001; Kezar, 2001; Santa Rita & Bacote, 1996). With this in mind, the FGAPs may assist FGS in their intellectual and personal/social development.

For the purpose of this study, participants enrolled in the Student Support Services Program and the Freshman Summer Institute at the University of South Florida will be used. Both programs are considered as FGAPs and serve the same population of students. The differences between the programs are that Student Support Services is funded by a federal grant every five years and the Freshman Summer Institute is funded by the University yearly. Unlike the Freshman Summer Institute, Student Support Services serves their incoming cohort of first-generation low-income college students for their freshman and sophomore year. The Freshman Summer Institute's participants are in the program for their freshman year.

Statement of the Problem

A common goal of colleges and universities is to provide a safe, welcoming and supportive environment for all students and to prepare them for their future careers. Many colleges and universities express commitment to the development of the whole student. Within this context, researchers have done several studies to examine variables that may help to increase the persistence rates of students by understanding the impact of students enrolled in FGAPs on FGS's academic success. However, there is scarcity of literature that examines the estimate of gains of FGS enrolled in FGAPs during their first-year in college.

There is much that is unknown about the effectiveness of FGAP's. One important area of effectiveness is related to the relationship of first-generation students' self-reported intellectual and personal/social estimate of gains to the academic success of students enrolled in First Generation Access Programs. In addition to the lack of research, degree attainment statistics concerning first-generation students are not good: When

compared to non-first-generation students, first-generation students are earning degrees at a much lower rate in the academy (Sengupta & Jepsen, 2006); within six years, African American and Hispanic students complete 4-year degrees at a 17% lower rate than all students enrolled in college (Carey, 2004); and only 26% of low-income students, compared to 56% of middle and upper income students, will earn their college degrees within six years (Original Author, as cited in Engstrom & Tinto, 2008).

Purpose of the Study

The purpose of this study is to determine if there is a relationship between self-reported estimate of intellectual and personal/social gains and first-generation first-year college student academic success enrolled in a FGAP at a large metropolitan institution in the South, as measured by the College Student Experiences Questionnaire (CSEQ) (Pace & Kuh, 1998), at the end of their first-year of college.

The CSEQ, developed by C. Robert Pace at the University of California in 1979 and hosted by Indiana University Center for Postsecondary Research, was used to measure the self-reported intellectual and personal/social estimate of gains of FGS in a FGAP. "The CSEQ is based upon a simple but powerful premise related to student learning: The more effort students expend in using the resources and opportunities an institution provides for their learning and development, the more they benefit" (Gonyea, Kish, Kuh, Muthiah, & Thomas, 2003, p. 4). The efforts students expend, "quality of effort," describes the amount of time and energy students invest in meaningful activities that are related to their educational goals (Kuh, Gonyea & Williams, 2005). In general, "student quality of effort in scholarly/intellectual activities and informal interpersonal activities are positively related to reported gains in intellectual skills and personal/social

development" (Ory & Braskamp, 1988, p. 116). The quality of effort is not the focus of this study. However, it is worthy to note because of the direct effect it has on students' estimate of gains, which is the focus of this study.

Theoretical Framework

Theoretical frameworks from higher education guide this study. Astin's Inputs-Environment-Outcomes Model (1991) and Tinto and Pusser's Model of Institutional Action for Student Success (2006), referred to as college impact models, was used to guide this study. Both theoretical models are valuable in the discussion of the self-reported intellectual and personal/social gains of FGS enrolled in the FGAP. Kuh (1995) stated that researchers (Astin, 1977; Astin, 1993; Light, 1992; Pace, 1990; and Whitely, Bertin, Ferrant &Yokota, 1985) have used the college impact model to validate "outcomes produced by interactions between students and their institution's environments, broadly defined. Thus, learning and personal development are a function of reciprocal influences among such institutional characteristics as size and control, such student characteristics as sex and ethnicity, and enacted perceptual and behavioral environments produced through contacts with peers, faculty, staff, and others including the types of activities in which students engage" (p. 126 -127).

Astin (1991) asserted that student outcomes indicate "aspects of the student's development that the institution does influence or attempts to influence through its educational programs and practices" (p.38). Tinto and Pusser (2006) contended that student success is directly correlated with the student's background characteristics and the institution's commitment. Taken together, the models recognize the significance of student characteristics and demographics as inputs and emphasize purposeful and

supportive interaction between the student and the university, which leads to greater intellectual and personal/social gains. With this in mind, Tinto and Pusser's Model of Institutional Action for Student Success is useful to corroborate Astin's Inputs-Environment-Outcomes (I-E-O) Model for the purpose of the proposed study. Astin's I-E-O Model is the conceptual backdrop for this study.

Astin's I-E-O (1991) model has been used by scholars to analyze student development based on several variables pertaining to their educational experiences (Wolf-Wendel, Ward, & Kinzie, 2009). Hutley (2008) asserted that Astin's I-E-O Model proposes that students are passively cultivated by professors, university programs, and the environment. The concept of the I-E-O Model is that learning outputs are assessed in terms of the background characteristics of students (inputs) in the comprehensive context of the university setting (environment) (See Figure 1).

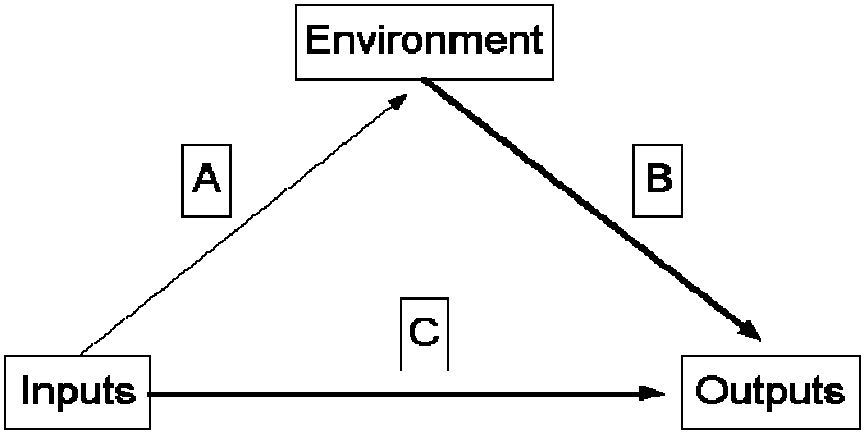

Figure 1. Inputs-Environment-Outcomes (I-E-O) Model (Astin, 1991, p. 18).

For the purpose of the proposed study, input characteristics consist of the background characteristics of FGS prior to enrollment such as academic preparation, socioeconomic status, ethnicity, and gender. Input characteristics represent the

independent variable, FGS, in the study and may affect both variables, FGAP, (environment) and estimate of gains (outputs) output. Environmental characteristics include how and to what extent the student engages in FGAP while enrolled. FGAP (environment) is considered a mediating variable upon the input and the influence it may have on the outputs. Output variables, estimate of gains and academic success, are the last dependent variables impacted both by FGS (inputs) and FGAP (environment).

For the purpose of this study, Tinto and Pusser's (2006) Model of Institutional Action for Student Success was used to assist in the discussion of the relationship among FGAP, FGS, and the estimates of intellectual and personal/social gains. The Model of Institutional Action for Student Success primarily recognizes the significant characteristics of students (abilities, skills preparation, attributes, attitudes, values, knowledge, and external commitments) as inputs while focusing on the relationship between the student and institutional commitment (referred to as the expectational climate) which may determine student success. FGAP provides resources to assist FGS in their academic and intellectual development. For the purpose of this study, the FGAP impacts the estimate of intellectual and personal/social gains of FGS students through the support, feedback, and involvement areas of the Model Institutional Action for Student Success (shown in Figure 2).

Research Questions

This research study addressed the following research questions:

1. What is the relationship between self-reported intellectual estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

2. What is the relationship between self-reported personal/social estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?
3. What is the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of first-generation students enrolled in First Generation Access Programs?
4. Is there a relationship between both self-reported intellectual and personal/social estimate of gains and academic success based on gender?

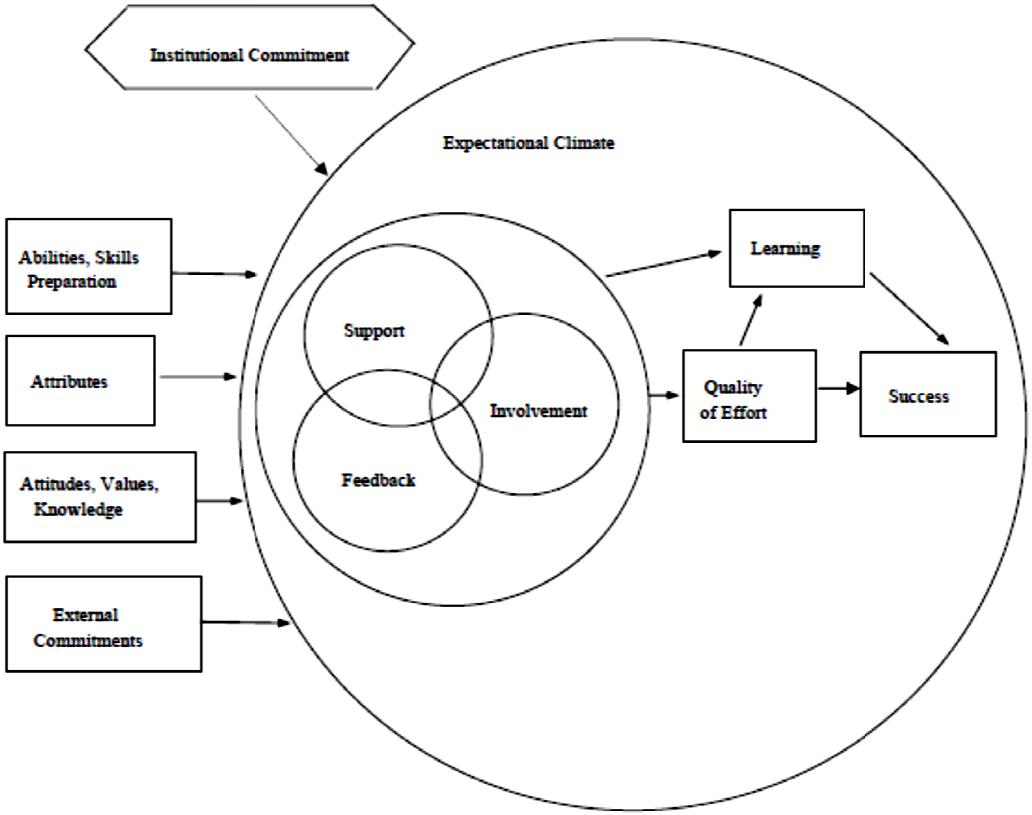

Figure 2. The Model of Institutional Action for Student Success (Tinto & Pusser, 2006, p. 9)

Significance of the Study

The population of first generation students is increasing on college and university campuses. However, studies indicate that there is not a noticeable increase in graduation rates for these same students. FGS need help to overcome barriers that hinder their intellectual and personal/social development. FGAPs were created to meet the needs of FGS.

The experiences of FGS warrant research and the special attention of university administrators. However, there is a lack of research that captures the self-reported estimate of gains of FGS participating in FGAPs. Kuh (1995) stated that student success, using college impact models, is based "less on the internal psychological processes associated with dimensions of change and more on the external environmental and sociological conditions and origins of change" (p. 126). Kuh, Kinzie, Schuh, Whitt, & Associates (2005) stated that the National Survey of Student Engagement indicated that student success in college depends on a supportive campus environment that has

1. an institutional emphasis on providing students 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 (p 241).

This study investigated the self-reported intellectual and personal/social estimate of gains of FGS participating in a FGAP. Findings from this study will add to the body of literature and assist university administrators in aiding the success of FGS.

Delimitations

This research study used secondary data from the College Student Experiences Questionnaire (CSEQ). Although secondary data is known to have a lack of control over the data collection, McMillan and Schumacher (2010) asserted that researchers use secondary data analysis because of the larger sample size and data quality. The CSEQ uses self-reported data to measure how students perceive their experiences and personal/social growth during their first-year in college. The self-reported data were gathered from survey participants at a large, public metropolitan university in the South. The researcher served as a survey administrator. Participants may have responded to the survey questions in the manner they believe the survey administrator desired, which may threaten the validity. With this in the mind, the survey administrator explained to the participants that their identity and data collected were kept confidential and secured by the Director of Student Affairs Planning, Evaluation & Assessment at the university. The generalizability is limited for this study as well. This study used only one large, metropolitan predominantly White institution in the South. The outcomes from this study will be able to be generalized only to first-generation students participating in similar FGAPs. Despite the fact that this study has limited generalizability, Nora, Barlow, and Crisp (2005) contended that single institution studies are helpful to understanding matriculation issues faced by students at institutions of higher learning.

Limitations

Limitations of the study include:

1. The instrument used in this study measures self-reported data from students who participated in the survey during the data collections periods.

2. The data included only first-generation, first-year students enrolled in First Generation Access programs that completed the CSEQ during specific academic periods.
3. Excluded from the data were students who did not complete the Estimate of Gains section of the survey and were not between the ages of 18-20.
4. The study did include students' high school grade point average or pretest scores from their estimate of gains.

Role of the Researcher

The researcher of this research study is a first-generation low-income student who did not participate in a FGAP as an undergraduate student. The researcher is currently employed by the FGAP that was used in this study and served as a survey administrator. As a first-generation college student compared to traditional college undergraduate students, the researcher shared similar pre-collegiate characteristics of first-generation students described in the literature: lacked social capital, academically ill-prepared, bleak perceptions of faculty and economically disadvantaged. Because of a lack of knowledge, social networks and guidance to navigate college resources, the researcher "battled" to get information that was necessary to being a successful student. With this in mind, the researcher expected the participants in this study, who are enrolled in FGAPs, to have noticeable perceived intellectual and personal/social estimate of gains as well as expected the estimate of gains to have a high positive correlation to academic success. Therefore, there was a possibility of researcher bias for this study. As an FGS who attended a large predominantly White institution in the South, the researcher was keenly interested in how

FGS perceived their intellectual and personal/social gains and the relationship to academic success while participating in a FGAP.

Definition of Terms

College Student Experience Questionnaire (CSEQ) - The CSEQ was first developed by Robert Pace in the 1970's. In 1979, the CSEQ was developed into a multi-institutional tool that uses self-reported data from the following three dimensions: Quality of Effort, College Environment, and Estimate of Gains. The preceding dimensions are used to measure a student's experience in college. The CSEQ is administered through the Center of Postsecondary Research at Indiana University.

Academic Success - *For* the purpose of this study, academic success is measured by the cumulative grade point average earned by the student at the end of the fall 2010 term. Each participant's cumulative grade point average will be obtained by the Director of Student Affairs Planning, Evaluation & Assessment at the University of South Florida. The information will not be identifiable per participant.

Estimate of Gains – Estimate of Gains is the self-reported knowledge that the student feels he/she has gained. For the purpose of the proposed study, the amount self-reported estimate of intellectual and personal/social gains will be measured by the College Student Experiences Questionnaire.

First-Generation College Students (FGS) - FGS are students whose mother and father have not earned a college degree.

First-Generation Access Program (FGAP) – FGAP consists of the Freshman Summer Institute (FSI), a summer bridge program, and TRIO- Student Support Services (TRIO-SSS) program. FSI and TRIO-SSS provide comprehensive academic and personal

support to assist first-generation low-income college students during their first-year in college.

Overview of Methodology

This study uses secondary data gathered by the university during the second implementation of the College Student Experiences Questionnaire (CSEQ), and utilized a correlational design. The secondary data used consisted of a purposeful sample of 792 students. The data were collected during the Fall 2010, Spring 2010, and Summer 2010 semesters. The purposeful sample comprised of students from the following groups at the university: athletes, student organizations, residence halls, and undergraduate course class sessions. Based on the eligibility criteria, freshmen, sophomores, juniors, seniors, and graduate students completed the survey.

For the purpose of this study, 275 students were eligible to complete the survey. Therefore, the target population consisted of 275 students. Of the 275 students in the population, 184 participants met the criteria for this study. For the purpose of this study, only first-year FGS participating in the FGAP who completed the "Estimate of Gains" section of the survey were used.

The assessment process for the university consisted of a student responding to an electronic and verbal invitation to participate in the CSEQ Assessment. The survey took 30 minutes to complete and was eight pages long. The questionnaire was available for students to complete during the summer and fall 2010 semesters. For the participants used in this study, the questionnaire was available for students to complete during the fall 2010 semester.

An analysis of the CSEQ scores was done to determine to what degree FGS status of these enrolled in the FGAP impacted their estimate of intellectual and personal/social gains. Descriptive statistics was calculated to describe the population of FGS participating in the programs. SPSS software was used for computer based calculations.

Organization of Dissertation

Chapter One contains an introduction to this study, a statement of the problem, theoretical framework, purpose of this study, research questions, significance of the study, limitations, definition of terms, overview of the methodology, and the organization of the dissertation. Chapter Two provides a comprehensive review of the literature and unifies the literature to establish groundwork for new research. Chapter Three describes the general methodological approach, research design, population and sample, instruments and data collection procedures, and analytical procedures to be used.

CHAPTER TWO

REVIEW OF LITERATURE

Higher Education is the gateway to the American dream, the eminent social equalizer (Leonhardt, 2005; Van Galen, 2000). White males from wealthy families were the majority of the college population during the 20th century (London, 2000). However, over the years, college has become accessible to more diverse populations. In 1944, veterans began taking advantage of the G. I. Bill (Robert & Thompson, 1994). Additionally, the community college system, a more affordable alternative to higher education, was instituted by the Truman Commission Report of 1947. Ethnic minorities gained access to predominantly White institutions of higher education via the Brown v. Board of Education United States Supreme Court decision in 1954. The Higher Education Act of 1965 increased monetary resources to assist students in attaining a college education. Financial aid programs, along with the programs listed above played a major role in growing the number of diverse groups of individuals who are allowed to access higher education (Millard, 1991, Vaughan, 1992). As a result, there is a higher proportion of students from minority working-class families attending colleges and universities today.

The following literature review is essential to integrate the four key components that exemplify the context for this study. The first component of the review explores the pre-collegiate characteristics and college experiences of first-generation college students (FGS) and the challenges they may face as a result of those pre-collegiate traits and

college experiences. The second component reviews the nature and purpose of first generation access programs (FGAPs) and their relationship to the status of FGS and their college experiences. The third component of this chapter reviews theoretical models developed on student success and persistence. The final section of this chapter provides an overview of the survey instrument used to measure the self-reported responses of FGS with regard to their quality of effort in attaining their educational goals.

First-Generation Students

The G.I. Bill, the Truman Commission Report of 1947, Brown v. Board of Education in 1954, and the Higher Education Act of 1965 contributed to the transformation of the population of students at institutions of higher learning. In the beginning of the 21st century, the landscape of higher education transformed to a more open access universal system which provided opportunities for students, in particular, FGS (Trow, 2001; US Department of Education, 2008). The Higher Education Act 1965 defined FGS as "(A) an individual both of whose parents did not complete a baccalaureate degree; or (B) in the case of any individual who regularly resided with and received support from only one parent, an individual whose only such parent did not complete a baccalaureate degree" (Higher Education Act of 1965, Sec.402B [6] g1 [a]). To better understand this population, researchers in higher education began to study this group and subsequently reported the need to assist these students to prevail over issues of social class, cultural barriers, and academic inferiority (Chaney, Muraskin, & Cahalan, 1998; Levine & Nidiffer, 1996).

There are several negative factors that impede the academic success, intellectual and personal social development of many first-generation first-year college students at

institutions of higher learning; however, there are positive aspects they bring with them that aid in their success as well. Jahangir (2010) indicated that first-generation students bring notable "cultural wealth" to colleges and universities, which is "generated from the lived experience that marginalized students draw on" (p. 542). The "cultural wealth" is defined as the persistence and resilience of this population of students. These students' parents have not attended college and have no understanding on how to pilot their children to earning a college degree. Therefore, many first-generation students must establish and manage their own paths to higher education with little direction from knowledgeable parents. With this in mind, first-generation students have to engage in countless struggles to get basic information that traditional college students can get from their parents.

According to Engle, Bermeo, and O'Brien (2006), 47% of first-generation students are enrolled in 2 – and 4 – year institutions. According to the U.S. Department of Education 2003 – 2004 National Postsecondary Student Aid Study, 24 percent of the undergraduate population consisted of FGS. This population was 64 percent female, 54 percent minority, 30 percent single parents, and 74 percent are financially independent from their parents. Despite the increase in access to college, first-generation freshman full-time college students entering institutions of higher education had dropped to 15.9 percent in 2005 compared to 38.5 percent in 1971 (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). Most studies revealed that FGS are more likely to depart college during their first-year (Choy, 2001). The Pell Institute (2008) reported that FGS are four times more likely to leave higher education in their first-year compared to their counterparts. Ishitani (2003; 2006) reported that FGS

are prone to drop out in their second year, suggesting that retaining FGS is significant past the first year of college. Choy (2001), The Pell Institute (2008), and Ishitani (2003) reports supported the significance of assisting FGS during their first and second year of college which is important in helping higher professionals assist FGS to persist. One of the most important factors in predicting college persistence is parents' educational level (Ishitani, 2003; Saenz et al., 2007; Spady, 1970; Tinto, 1975). Low completion rates of Latino and African American FGS have been associated with the fact that their parents never went to college (McCarron & Inkelas, 2006). As a result of their parents not attending college, the students' social capital as it pertains to educational resources is severely limited (Hooks, 2000).

Previous studies have shown that many FGS have lower pre-collegiate critical thinking skills, lower ACT and SAT scores, lower grade point averages, and limited information about the college experience (Ishitani, 2006; Orbe, 2004; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Saenz, Hurtado, Barrerra, Wolf, &Yeung, 2007). As a result, FGS mostly attend 2-year colleges and less selective institutions (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Choy (2001) indicated that the level of parent education is directly correlated to student academic preparation. Nunez & Cuccaro-Alamin (1998) found that students whose parents had a bachelor's degree demonstrated greater degree attainment by 76 percent compared to FGS's parents without a college degree. With this in mind, compared to traditional college students, many FGS come to college with a myriad of negative factors that impede their academic success. These negative factors include but are not limited to lack of academic preparation and intellectual development, lack of financial support, and scarcity of social networks.

Academic ill-preparedness is a leading negative factor of FGS. Their self-confidence about their abilities can be detrimental. Accurate self-assessment is characteristic of successful students in higher education. FGS tend to be most inaccurate in their self-assessments. These students show signs of over-optimism or over-negativism. Over-optimism can lead to underestimating the demands of the academic task (Hacker, Bol, Horgan, & Rakow, 2000). Over-negativism can result in lack of motivation (Pajares & Schunk, 2001). Both result in inaccurate estimates of preparedness for exams and predicting final course grades once in college (Garavalia, Ray, Murdock, & Gredler, 2004).

Fasset & Warren (2004) indicated that many FGS believe they do not need help to navigate the college bureaucracy and fear being stigmatized by their peers. However, Reid & Moore (2008) found that students who were lacking study skills had the most difficulty in transition to college. FGS need help in accessing universities' academic resources. Hence, institutions may need to assess the needs of these students while simultaneously providing the necessary academic resources. Thus, it is important that FGS are successful in academically integrating into the institutions of higher learning. Academic integration, students' grades, and students' intellectual development (Tinto, 1975) are paramount to their persistence and success at institutions of higher learning.

Another factor that impedes the success of FGS is social class, most commonly termed socioeconomic status. Warburton, Bugarin, & Nunez (2001) noted that FGS are more concerned with financial matters and lack foundational information of the bureaucracy of higher education operations. Compared to 9 percent of their peers, 29 percent of FGS are from low-income families (Warburton et al., 2001). FGS from low-

income families tend to earn certificates in vocational and technical programs compared to their peers who earn degrees from universities (Adelman, 2005; Hochlander, Sikora, Horn, & Carroll, 2003; Kuh et al., 2007; Striplin, 1999).

The socioeconomic status of FGS results in lack of social capital. Putnam (2000) described social capital as the understanding of social pathways or social networks that help to access resources. Maldonado, Rhoads, & Buenavista (2005) emphasized the importance of both cultural and social capital in relation to college student retention. Maldonado et al. (2005) defines cultural capital as the "linguistic and cultural understandings and skills that individuals bring to schools on the basis of their social class location," (p. 609) and social capital as "skills and capabilities enabling individuals to act in different ways" (p. 610). To navigate resources in higher education, students need both cultural and social capital to aid in their success. Insufficient social capital contributes to this group's lack of self-esteem and social satisfaction at the university. It relates to the context of the campus ecology and the student. It is the congruence of the environment and the students' cultural values. As noted above, there is a scarcity of social networks for FGS. With this in mind, FGS have less social networking knowledge and skills, which equates to fewer role models. FGS tend to limit their college aspirations if they do not feel connected to the campus coupled with a lack of family support for their decision to attend college (Thayer, 2000). Tinto (2003) contended that "the more students are academically and socially involved, the more likely are they to persist and graduate"(pp. 4-5). Ishitani, Davis, Lyzogub, & Snider (2001) asserted that "levels of academic and social integration ultimately enhance a student's overall college experience" (p. 1).

There is a scarcity of studies of FGS. From the few studies available, Somers, Woodhouse, & Cofer (2004) and Terenzini et al. (1996) are most relevant to accentuating the characteristics and experiences of FGS for the purpose of this study. The findings from these studies identified the attributes and encounters that FGS endure in their first-year of college.

Terenzini et al. (1996) investigated the differences in pre-college characteristics, experiences during the first year of college, and consequences of these differences for cognitive development between first-generation and traditional college students. The participants in the study completed a pre-college survey in fall of 1992 and a follow-up survey in Spring of 1993. The data were collected by the National Study of Student Learning (NSSL). The data were gathered from a three-year longitudinal study of 3,840 students nationwide enrolled in 18 four-year and 5 two-year colleges in fall of 1992 through random selection from a pool of new students. The survey included questions about demographic and background information, college aspirations and expectations, and adjustments toward learning. Students also completed Form 88a of the Collegiate Assessment of Academic Proficiency (CAAP), as part of the 1992 survey. CAAP (88a) assessed students in reading, mathematics, and critical thinking. The follow-up survey included Form 88b of the CAAP, the College Student Experience Questionnaire (CSEQ), which assessed students' experiences of their first year in college, and another questionnaire that covered questions that were not included in the CSEQ. The number of participants in the initial survey in 1992, which consisted of 3,840 students, dropped to 2,685 participants in the follow-up survey in 1993. The follow-up survey consisted of 825 FGS and 1,860 traditional college students.

The five independent variables that were analyzed in the study were 37 pre-college characteristics (e.g. race/ethnicity, educational goals, family income, and CAAP tests scores), in-class experiences, out-of-class experiences, academic experiences, and institutional characteristics. To measure any differences between first-generation and traditional students' first-year of college, Terenzini et al. (1996) used an ordinary least-squares (OLS) regression on the pre-college survey. OLS regressions were used on the CSEQ and the additional questionnaire that assessed the participants' college experiences. To examine the effects of the variables on the cognitive development between first-generation and traditional college students, the researchers acquired the CAAP scores from the follow-up survey and did OLS regressions on the initial CAAP scores and the pre-college characteristics.

The major findings of this study revealed that FGS were "more likely to come from low-income families, to be Hispanic, to have weaker cognitive skills, to have lower degree aspirations, and to have been less involved with peers and teachers in high school" (Terenzini et al., 1996, p. 16). Compared to traditional college students, FGS's perceptions of faculty members were bleak, experienced more racial or gender discrimination, worked more off-campus jobs, took fewer courses in fine arts and humanities, and completed fewer credit hours in their first year. In math and critical thinking skills, first-generation and traditional students gain an equal amount of knowledge. However, there was a significant difference in reading gains made by traditional college students (greater gains) versus FGS. Terenzini et al. (1996) suggested that the number of hours worked, the number of hours spent studying and college experiences have different effects and are more important for FGS than traditional

college students. Terenzini et al. (1996) study examined the effect of summer bridge programs on the experiences and academic gains between FGS and traditional college students. The proposed study differs in that it specifically investigates two summer bridge programs and the impact they have on estimate of gains for FGS in the areas of academic and social integration.

Somers et al. (2004) investigated how tuition and fees and financial aid awards, achievement, background characteristics, educational goals, and colleges experiences effect persistence for first-generation and non-first-generation students at four-year institutions of higher learning. Somers et al. defined first-generation students as "those whose parents had an educational level of high school diploma or less" (p. 423). Sociology and economics theoretical frameworks were employed. The sample size consisted of 24, 262 students, specifically, 15,972 were non-first-generation students and 8,290 were FGS. To organize their study, Somers et al. used the model developed by St. John (1994) and analyzed the data provided by the National Postsecondary Student Aid Study of 1995-1996 (NPSAS:96). Six variables (i.e. college experiences, academic success, price of attendance, debt load, background characteristics, and educational goals) were evaluated using logistic regression to examine within-year persistence.

The findings of the study found that several variables significantly affected persistence: "Low-income" FGS are unlikely to persist, FGS freshmen who struggled academically doing their first-year are unlikely to persist, the debt load of FGS were extremely lower than the debt load of non-first-generation students, and goals of attaining an advanced degree were higher for FGS who had high aspirations in attaining a bachelor's degree. The authors suggested seven methods to help increase persistence for

FGS: (1) create early college awareness programs for first-generation students and their parents, (2) provide early academic programs, (3) make financial aid awards with loan amounts and higher grant funding, (4) provide academic and social support at the beginning of FGS's college career, (5) establish an environment that is conducive for faculty interaction, (6) provide counseling to address personal concerns, and (7) cultivate programs that encourage attendance and persistence of FGS. Overall, this study added to the literature regarding the need for comprehensive academic and personal support programs for persistence of first-generation students. Therefore, Somers et al. helped fill a gap in the literature by showing the need for academic and personal support programs in order for FGS to successfully acclimate to the college environment.

The review of the literature suggests that FGS come to college with a myriad of issues that may hinder their success in comparison to traditional college students. FGS may need assistance to help them navigate the unfamiliar cultural environment and the bureaucracy of institutions of higher education. A review of First Generation Access Programs is a significant next step in the discussion of FGS in higher education.

First-Generation Access Programs

First-Generation Access Programs (FGAPs) help students to overcome the challenges of academic ill-preparedness and social adjustments issues that occur in their transition from high school to college. FGAPs, also known as TRIO - SSS and Summer Bridge Programs, are useful in persistence and retention efforts of first-generation low-income students at institutions of higher learning. Both programs were created to help students overcome the academic, social, socioeconomic, and cultural barriers to higher education.

Motivated by President Lyndon Johnson's "War on Poverty," several programs designed to assist disadvantaged students to attain a college degree were created. The Higher Education Act (HEA) legislation gave rise to access programs administered by the U.S. Department of Education and had a genuine impact on higher education policy (Callan, as cited in Heller, 2001; Higher-ed, 2008). The objective of the Higher Education Act was "to strengthen the educational resources of our colleges and universities and to provide financial assistance for students in postsecondary and higher education" (Higher-ed, 2008, p. 1).

In 1968, the federal government created TRIO programs, encompassing the following three programs: Upward Bound, Talent Search, and Student Support Services (Council for Opportunity in Education, 2008; US. Department of Education, 2007). TRIO programs help "to ensure equal opportunity for all Americans regardless of race, ethnic background, or economic circumstance" (Balz & Esten, 1998, p. 334). Congress mandated that one-third of the population served by TRIO programs should be first-generation, low-income, or mentally and/or physically disabled. The remaining two-thirds of the population should be both first-generation and low income (Zhang, Chan, Hale, & Kirshstein, 2005). The Upward Bound program helps eligible individuals and veterans prepare for education at colleges and universities; Talent Search programs informs sixth to twelfth graders about educational opportunities; and Student Support Services (SSS), the TRIO program to be used in the proposed study, serves first-generation and low-income students. TRIO- Student Supports Services participant population grew respectively over 11 fiscal year periods: from 179,377 in 1997 – 1998 to 199,499 in 2007 – 2008 (U.S. Department of Education, 2008b). This growth shows the

consistent focus and commitment to serving first-generation and low-income students. However, there is a lack of literature concerning the factors that supplement the academic success of FGS enrolled in FGAPs.

TRIO – Student Support Services (TRIO-SSS). The purpose of TRIO-SSS is to improve graduation rates of first-generation, low-income, and disabled students at postsecondary institutions (Zhang & Chan, 2007; Zhang et al., 2005). The program also seeks to provide guidance and sustenance for these students when applying to professional programs. The code of Federal Regulations (Student Support Services Program, 2009) defines the goals of the program to:

1. Increase the retention and graduation rates of eligible students. 2. Increase the transfer rate of eligible students from two-year to four-year institutions. 3. Foster an institutional climate supportive of the success of low-income and first-generation college students and individuals with disabilities through services such as those described in 646.4. (#1)

TRIO-SSS, funded by the federal government, supports students by providing instructional services in the following areas: reading, writing, study skills, and math. The program also offers peer counseling, mentoring that involves faculty, personal counseling and guidance in selecting appropriate college courses that fit the students' individual degree goals and academic ability to successfully complete the courses (Council for Opportunity in Education, 2006).

Summer Bridge Programs. Similar to TRIO-SSS Program, Summer Bridge programs (SBPs) evolved from the need to assist new populations entering higher education to make successful transition to college. SBPs have existed since the 1960s and

grew to institutions of higher education over the past 40 years. The focus of SBPs vary from campus to campus, and many emphasize the significance of retention of target populations such as low-income, minority, international, or first-generations students. Colyar (2011) stated that "summer bridge programs are intended to address important preparation and achievement gaps that are evident in the research" (p. 123). Thus, the common focus is to retain these populations to provide the same opportunity as traditional college students (Kezar, 2001).

Kezar (2001) also noted that many institutions have observed their ability for improving academic preparation. Increased pressure and calls for accountability measures from recent reauthorizations of the Higher Education Act of 1965 and funding based on reported retention rates are mentioned as a major influence for increased retention programs (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). As a result, there has been increased funding for programs directed toward recruiting first-generation and low-income students to not only enroll, but also to complete degrees (U.S. Department of Education, 2009).

There is limited research that exists investigating SBPs. York and Tross (1994) showed that students served by SBPs benefit from activities geared toward increasing self-confidence, mentoring, and community development (Phillips, 2008). Another study indicated that students involved in SBPs fair better than similar students who did not participate in the program (Santa Rita & Bacote, 1996). However, York and Tross (1994) revealed that studies on SBPs lack data of students' persistence rates and grade point averages. Of the limited research that exists concerning SBPs, it was reported that participants fair better academically and persisted at a higher rate than students who were

not enrolled in an SBP (Santa Rita & Bacote, 1996; Walpole, Simmerman, Mack, Mills, Scales, & Albano, 2008). In contrast to literature that reported SBP participants performing better academically, there are a few scholars that do not believe they play a significant role in assisting participants in their programs. According to Myers and Schirm (1999), SBPs help students more socially than academically. Hall (2011) and Oseguera, Locks, and Vega (2009) reported that participants enrolled in summer bridge programs may be stigmatized as students who do not have the competencies necessary to be successful in college.

Hall (2011) found two factors that may be the cause of limited research regarding literature about retention and SBPs. The first issue sited was the limitation of generalizability of data about SBPs. As stated earlier in this section, these programs vary from campus to campus which results in a considerable amount of difference to factors that may not be applicable or accurate to describe other SBPs. Taylor (2011) found that focus of SBPs range from only emphasizing academics regarding developmental courses, to preparation for college placement tests, to recreational activities. The second issue of concern is the lack of a homogenous system of unanimity of retention measures that would help in more accurate reporting of the outcomes of students enrolled in SBPs. Some research has measured retention by completion of students' first two semesters while others determine retention rates from the students' first semester to each semester until the end of the students' tenure at the institution.

Despite the scarcity of literature and research described above, the information provided about SBPs proposes they are a comprehensive and effective way to help participants in their programs transition to institutions of higher learning. SBPs provide

resources that help students develop their intellectual and personal/social skills. To add to the literature and provide more data concerning the relationship between FGAPs and their participants' academic success, the proposed study will examine the relationship between FGS perceptions of their intellectual and personal gains enrolled in FGAPs and their academic success.

TRIO-SSS Program and Freshman Summer Institute Program at a large metropolitan university in the South. The FGAP in this study provides access to a university education for promising students from first-generation and/or limited income families who do not meet the competitive fall admission criteria, but who demonstrate the potential to succeed at the university. These individuals are identified through a review of the admission application, academic records, and the Free Application for Federal Student Aid. Therefore, the following areas are reviewed: performance in college prep courses, standardized test scores, family education, and family income. Research states that the freshman year is the most crucial period for student retention and may determine the likelihood of a student staying or leaving the university (Kezar, 2001; Pascarella et al., 2004; Terenzini et al., 1996). With this in mind, the FGAP mentioned focuses on preparing students for the challenges of their first-year in college. These challenges include, but are not limited to: (a) overcoming academic ill-preparedness, (b) taking tests, (c) managing the volume of work compared to high school, (d) learning to learn effectively, (e) adjusting to the university environment, (f) managing time well, (g) being away from home, and (h) balancing school, work, friends, and activities.

To help students prevail over the aforementioned challenges, the FGAP mandates that students fulfill the following requirements: summer residency, tutorial support, one-

on-one advising, and counseling (three appointments each semester - Summer, Fall, and Spring) and personal and academic development workshops. If students do not meet the requirements, registration holds are placed on their student accounts and removed once the requirements are met. The FGAP focuses on affective and cognitive needs of students. Advisors monitor students' performance throughout the year, which includes meeting to discuss midterm grade reports and ensuring that students are making healthy adjustments to the university environment. The FGAP also works closely with other programs and services on campus to better serve their student population. Overall, the FGAP seeks to provide resources to help the students navigate the bureaucracy of the university system (i.e. residence services, financial aid, course scheduling, and academic advising).

All students who are accepted into the programs are required to fully participate in a six-week summer school semester which includes taking nine credit hours and living on campus. The summer is the first opportunity for the students to articulate the social, personal, and academic concerns that they may experience as they are getting acclimated to the university. More specifically, the six-week summer school semester is used to determine whether students have the motivation to use their potential to succeed. During the summer semester, along with the Federal Pell grant, most students receive an additional grant or scholarship from the programs based on students' financial need. Peer counselors are also utilized in the program. Studies show that "peer-group associations appear to be most directly related to individual social integration" (Tinto, 1975, p. 110). Peer-group associations help to mediate the campus climate and serve as emotional support for students counseling (Jacobi, 1991). Students benefit by getting a "head start"

over students enrolling in Fall semester; making social networks with faculty, staff, and students before the fall begins and adjusting to the intellectual skills needed to succeed at the university.

Despite the lack of research, the literature indicates that FGAPs are valuable in helping meet the needs of first-generation low-income students. The programs are effective in providing academic, social, and personal support for FGS. With this in mind, FGAPs aid in the retention efforts of FGS. The next section of the literature review is important in connecting the theoretical notions of the issues faced by FGS and the impact of being enrolled in a FGAP may have on the self-reported perceptions of the quality of effort of FGS at institutions of higher education.

Theoretical Framework

Within a 35 year period, gaps in access to higher education decreased between first-generation college students and traditional college students. The number of FGS attending college increased by 60 percent from 1970 to 2005 (The Pell Institute, 2008). Gaps in graduation rates between students from high to low socioeconomic status have slightly decreased. The rate of FGS attaining a baccalaureate degree has only increased by 6 percent from 1970 to 2005; compared to a 33 percent increase of "non-traditional" students from 1970-2005 (The Pell Institute, 2008). The literature states that all students bring particular background characteristics, pre-collegiate academic preparation, and varying levels of socioeconomic status which impact their ability to acclimate to the college environment (Astin, 1970; Pascarella & Terenzini, 1983, Somers et al., 2004; Spady; 1970, 1971; Terenzini et al., 1996; Tinto, 1975; Tinto & Pusser, 2006). This section of the literature review focuses on the theoretical frameworks of Astin's (1991)

Input-Environment-Outcome (I-E-O) Model, Tinto's (1975; 1993) reports concerning students' integration to institutions of higher education, and Tinto and Pusser's (2006) Model of Institutional Action for Student Success. Both models and reports attempt to explain the influence of participating in FGAPs on the self-reported "estimate of gains" for first-generation college students in their first-year of college. With this in mind, each theoretical model is useful in the discussion of FGS. For the purpose of this study, Astin's I-E-O Model is used as the theoretical framework.

Astin's Inputs-Environment-Outcomes (I-E-O) Model. Researchers have employed Astin's (1991) I-E-O Model to determine student development based on multiple variables of their educational experiences. His model has been used by many researchers as a theoretical framework for analyzing student development (Wolf-Wendel, et al., 2009). Astin (1991) stated that most of his research caters to students in educational settings but is valid in many environments. For the purpose of this study, the following variables were considered: FGS characteristics (input); FGAPs (environment); and estimate of gains, CSEQ instrument (output). Astin (1991) stated that student outcomes refer to "aspects of the student's development that the institution does influence or attempts to influence through its educational programs and practices" (p. 38).

The following are reflected in the model (see Figure 1): (a) environment – it has a relationship with inputs, (b) outputs are affected by the environment, and (c) inputs affect outputs. In this study, the environment, FGAP, would be affecting the output, estimate of gains--the self-reported knowledge gained by the student. According to Astin (1991), student input characteristics that have "potential interaction effects with environmental variables are the student's gender, ethnicity, age, ability, and socioeconomic level" (p.

67). With this in mind, Astin believes that one of the rationales for assessing input variables is to determine if a student's background and the environment interface eventually affecting the output. Flowers (2004) reported that minority students, mainly of African American decent, are positively influenced in their educational outcomes when engaged by faculty and student organization/groups but tend not to be as involved with their environment.

According to Tinto (1975), the greater the student's level of academic integration, the greater the level of subsequent commitment to the goal of college graduation. Also, the greater the student's level of social integration, the greater the level of subsequent commitment to the college or university.

Tinto (1993) reported,

> In the collegiate setting, research has tended to support the conclusion that the establishment of supportive personal relationships – with faculty, peers and other significant persons – enables students to better cope with the demands of the college environment. . .this in turn, has a positive impact upon student academic success. (p. 122)

Tinto (1993) also reported, "student learning best occurs in settings that involve students in the daily life and provides social and intellectual support for their individual efforts" (p. 147). Social and intellectual support can come from contact with students in multiple settings but Tinto suggested,

> Institutions must consciously make an effort to reach out and establish personal bonds among students and between students, faculty, and staff members of the institution. Particularly important is the continuing emphasis upon frequent and

> rewarding contact between faculty, staff, and students in a variety of settings both inside and outside the formal confines of the classroom and laboratories of institutional life. (p. 147)

Tinto and Pusser (2006) further explored a model for student success by creating the Model of Institutional Action for Student Success. For the purpose of the proposed study, the model discussed next, though not the theoretical framework, is most fitting to capture the significance of FGAPs for FGS.

Model of Institutional Action for Student Success. The Model of Institutional Action for Student Success was developed by Tinto and Pusser (2006) in an effort to provide guidelines for institutions of higher education to aid in increasing student persistence and student success. The model refers to "persistence" and "success" as the ability and behavior of the institution's environment to promote persistence and success for students, thus enhancing persistence and degree completion of students. Their model considers two major components that are embedded and merited in retention and persistence theories.

The first component of the model takes into account the conditions for student success: commitment, expectations, support, feedback, and involvement. With this in mind, the model also recognizes the students' attributes abilities, demographics, and external commitments. The second component of the model takes into consideration the institutional actions for student success: institutional commitment and leadership, expectational climate/campus climate, support, financial aid, advising, academic support, social support, feedback, involvement (academic integration), pedagogies of engagement, and learning communities. More specifically, the action within the institution is not

described in any program detail are the areas of support, involvement and feedback. The preceding action areas are implanted within an expectational climate and effect quality of effort, learning, and success (retention/persistence) (see Figure 2). FGAPs operate in many areas of the model. The literature reviewed indicates that FGAPs, an element of FGS's first-year experience in these programs, work specifically in the support, involvement (academic integration), and feedback action areas.

The advising of FGS provided by FGAPs are an essential component of Tinto and Pusser's (2006) notion of support. Tinto and Pusser (2006) put emphasis on the ability of advisors providing timely and precise advice for students. Coupled with student development activities (i.e. career, personal, and professional development), the type of advising described in the model is offered to students in FGAPs. Research indicated that proper advising is one of the major forms of support and guidance for students in their assessment of academic specialties. The action area "support" not only includes advising as support but social support as well. Social support provides an environment for positive growth in self-esteem (Poisson & Russel, 1990), encouragement, and situational appraisal which can prevent or reduce stress (Allen et al,. 1999; Poisson & Russel, 1990). With this in mind, bringing together advising and social support together as the single action area "support" joins the academic and social functions of FGAPs.

Under the action area "involvement," Tinto and Pusser (2006) merged the theoretical frameworks of involvement and integration. Students' behaviors and attitudes toward campus activities are described by the term involvement, commonly known as engagement. Studies show that students' attitudes regarding campus activities affect their

level of participation. Also, when students partake in campus activities, there is a better chance of shaping their attitudes about that specific activity.

The third action area discussed for the purpose of this study is feedback. This action is crucial as it is a condition for student success in the model. Studies show that students are more likely to be successful in an environment where they are provided consistent feedback about their academic performance and an environment that monitors and understands their learning styles and academic ability. The literature purported that FGAPs are successful in providing environments for students to thrive because of its' focus on the needs of the at risk population it serves. In essence, Tinto & Pusser's (2006) Model of Institutional Action for Student Success is in sync with and supports the objectives of FGAPs for FGS to persist and be successful at institutions of higher learning.

Astin (1991) and Tinto and Pusser's (2006) research on student development and student success has added to the body of literature geared toward bettering the development and success strategies to assist FGS to persist at institutions of higher learning. With this in mind, theories suggest that FGAPs are an essential component in meeting the needs of FGS and the accountability of the colleges and universities. In the final section of the literature review, the survey instrument used to measure the self-reported intellectual and personal/social gains of the students' responses will be discussed.

College Student Experience Questionnaire (CSEQ)

The College Student Experience Questionnaire (CSEQ) was developed in 1979 by C. Robert Pace at the University of California, Los Angeles. The CSEQ, used to measure

self-reported responses to questions reflecting the quality and quantity of student involvement, has been administered to assess the quality of the undergraduate experience at many institutions of higher education. The CSEQ consists of 151 items measuring the amount of time and energy students devote to their experiences in three categories: personal, educational, and extracurricular activities; perceptions of various aspects of the university environment; and what they have gained from the attending the university. Pace's "quality of effort" model suggest that the amount of time and energy students invest in meaningful activities impacts their educational goals. Kuh, Gonyea, and Williams (2005) asserted "quality of effort is the single best predictor of what students gain from college; this measure can be used to estimate the effectiveness of an institution or its component organizations in promoting student learning" (p. 40).

For the purpose of this study, the last section of the CSEQ, Estimate of Gains, was used to measure the self-reported intellectual and personal/social gains of the students' responses. Gonyea, Kish, Kuh, Muthiah, & Thomas (2003) stated,

> Asking students to reflect on what they have gained from their college experience is consistent with a value-added approach to outcomes assessment. That is, attending college is expected to make a difference in students' knowledge, values, attitudes, and competencies. Because students know what they were like when they started college, the gains they have made are value-added judgments of learning. (Pace, 1984, as cited in Gonyea et al., 2003, p. 6-7)

The 25 items in this section of the survey ask students to reflect on their university experiences and how they believe the amount of progress they have made on their educational goals. The selected 11 items of the 25 items for this study are listed in Figure

3. The participants were asked to indicate their response by filling in ovals by each statement shown as very much, quite a bit, some, or very little.

ESTIMATE OF GAINS ITEMS
Intellectual Gains Items
Writing Clearly and effectively
Presenting ideas and information effectively when speaking to others
Using computers and other information technologies
Developing good health habits and physical fitness
Thinking analytically and logically
Putting ideas together, seeing relationships, similarities, and differences between ideas
Learning on your own, pursuing ideas, and finding information you need
Personal/Social Gains Items
Developing your own values and ethical standards
Understanding yourself, your abilities, interests, and personality
Developing the ability to get along with different kinds of people
Developing the ability to function as a member of a team
Learning to adapt to change (new technologies, different jobs, or personal circumstances

Figure 3. Estimate of Gains Items (Gonyea et al., 2003, p. 6) Revised

Summary

In this chapter, literature regarding first-generation college students, First-Generation Access Programs, and involvement and student success theory was presented. The literature indicated that first-generation college students come to college with a multitude of issues that make their transition into institutions of higher education

extremely difficult. As a result, many first-generation students enroll but do not attain a college degree. There has been limited research conducted regarding the instrumentation of programs and strategies employed to assist this population of students with their transition to college. More research is required to educate higher educational professionals to effectively help these at-risk students to be successful.

Next, significant and relevant research on First-Generation Access Programs was investigated to better understand how the nature and existence of these programs relate to first-generation college students. Although there is not much research of First Generation Access Programs, the literature indicates that First Generation Access Programs are valuable in helping meet the needs of first-generation college students. The programs are effective in providing academic and social support needed to help this population to persist and to increase the odds of them earning a college degree.

The third section of the literature review on involvement and student success theory was explored as a next step in relating the theoretical notions of the issues faced by first-generation college students and the impact First-Generation Access Programs may have on the self-reported perceptions of the quality of effort of first-generation college students at institutions of higher education. Astin (1991) and Tinto and Pusser (2006) suggested that First Generation Access Programs play significant roles in meeting the needs of first-generation college students and that college and universities are accountable for this population's success as well. The final component of this chapter briefly discussed the survey instrument used to measure the self-reported intellectual and personal/social gains of the students' responses. Gonyea et al. (2003) stated, "Asking

students to reflect on what they have gained from their college experience is consistent with a value-added approach to outcomes assessment" (p. 7).

Chapter Three presents a description of the methods utilized for measuring self-reported estimate of gains of first-generation college students participating in First Generation Access Programs at a large metropolitan institution in the South.

CHAPTER THREE

METHODS

The purpose of this study was to investigate the relationship between the self-reported intellectual and personal/social estimate of gains among first-generation, first-year college students (FGS) participating in the First Generation Access Program (FGAPs) at a large metropolitan institution in the south and their academic success. The College Student Experiences Questionnaire (CSEQ), the instrument that was used for this study, will be described. The CSEQ was used to measure the self-reported estimate of intellectual and personal/social gains of FGS participating in a FGAP.

This chapter provides a description of the research design, population sample, variables, the reliability and validity of the instrument used to measure the variables, data collection procedure, and data analysis.

Research Design

This quantitative study used secondary data. McMillan and Schumacher (2010) stated that secondary data is useful to researchers because of the increased sample size and the quality of data. With this in mind, secondary data was beneficial to achieve a large sample size and data quality. A correlational research design was used in this study to examine the extent to which the variables are related. Correlational design was the appropriate design to use to determine the degree of association among two or more variables (Creswell, 2005). A multivariate analysis was conducted since more than one

variable was included in this study. A multivariate analysis was also employed to reveal the variance of the relationships of variables. When predicting a single independent variable, a multivariate analysis is usually utilized because more than one dependent variable is examined (Mertler & Vannatta, 2005).

Population and Sample

The University of South Florida is a large metropolitan predominantly White institution in the south consisting of approximately 30,000 undergraduate students. The target population is FGS first-year college students participating in a FGAP. The number of participants in this study was 184 which was sufficient to achieve population validity. The purposeful sample size from the target population was determined by assessing the number of first-year FGS (275) participating in a FGAP enrolled at the stated institution. Frankel and Wallen (2006) asserted that researchers should try to get a large enough sample for generalizability or "study the entire population of interest" (p. 92). Since the FGAP used in the study was mostly populated by traditional aged students and this study focused on freshman students, all participants in the study was 18-20 years of age.

Variables

The independent variables in this study included FGS characteristics (input), gender (input), and FGAP (environment). The dependent variables in this study included academic success (outcome), the self-reported intellectual and personal/social estimate of gains (outcome), as measured by their responses to the selected 11 questions in the Estimate of Gains section of the CSEQ.

The independent variables, FGS characteristics, gender, and FGAP are considered assigned and are nominal level measurements. FGAP is a mediating variable. The

dependent variables, self-reported intellectual and personal/social estimate of gains, are continuous variable and are ordinal levels of measurements. Academic success data was provided by the Director of the Student Affairs Assessment. The remaining dependent variables, self-reported intellectual and personal/social estimate of gains, were measured by a total score of the Likert-type scores per applicable question on the CSEQ section, Estimate of Gains.

Instruments & Measures

College Student Experiences Questionnaire (CSEQ). The College Student Experiences Questionnaire (CSEQ) was developed in 1979 by Robert Pace at the University of California, Los Angeles and is housed at The Center for Postsecondary Research at Indiana University. The CSEQ has been revised three times in 1983, 1990, and in 1998. The CSEQ was used to measure the self-reported responses of the quality of effort and quantity of students' extra-curricular and classroom involvement, perceptions and gains for the assessment of programs and the degree to which institutions of higher learning are successful in meeting the needs of students (Center for Postsecondary Research, 2007). In addition, the fourth edition of the instrument has been used to collect self-reported data from over 10,000 students enrolled in more than 200 colleges and universities (Gonyea et al., 2003).

The CSEQ uses self-reported data based upon the participants' responses to the items on the questionnaire. There are five conditions that self-reported data should include to achieve validity:

1. the respondents understand the information requested;
2. the questions are phrased clearly and unambiguously;

3. the questions are about recent activities;
4. the respondents believe the questions are thought-provoking and serious-minded; and
5. responding to the questions does not make the respondent feel a violation of their privacy, shameful, unsafe or cause the respondent to answer the questions in the manner they believe the researcher desire (Hu & Kuh, 2002, 2003).

According to Hu and Kuh (2002, 2003),

> The CSEQ items satisfy all of these conditions. The questions are clearly worded, well defined, have high face validity, and ask students to reflect on what they are putting into and getting out of their college experience. The questions refer to what students have done during the current school year. . .The format of most response options is a simple rating scale that helps students to accurately recall and record the requested information. (p. 323)

The CSEQ also has "excellent psychometric properties" (NCES, 1994, p. 31). Kuh and Vesper (1997) reported that the CSEQ "has a high to moderate potential for assessing student behavior and aspects of the college environment associated with desired outcomes" (p. 46).

Pace and Kuh (2002) affirmed that the CSEQ has been observed to have high reliability in assessing the types of activities that contribute to gains in general academic and learning skills. The internal validity of the CSEQ sections (Personal Development, Science and Technology, General Education, Intellectual Skills, and Vocational

Preparative Scientific and Quantitative Experiences) ranges from .77 to .87 (Pace & Kuh, 2002). An alpha between .73 and .92 is noted for individual scale reliabilities.

For the purpose of this study, questions that related to the intellectual and personal/social factors from the Estimate of Gains section of the CSEQ was used. The Estimate of Gains section uses a 4-point Likert type scale (very much, quite a bit, some, and very little). This section of the instrument asks the participant to reflect "about your college or university experience up to now, to what extent do you feel you have gained or made progress." With this in mind, the instrument specifically asks how much he or she has gained or improved as a result of his or her collegiate experience, as shown in Figure 3 Estimate of Gains Items. The Estimate of Gains scores usually directly reflect the evidence of actual gains (Pace, 1985). For the purpose of this study, responses to the intellectual and personal/social gains questions were analyzed.

One of the main purposes of the CSEQ is to evaluate the quality of effort that students use in taking advantage of campus resources provided for their intellectual and personal/social development. The Quality of Effort scales correlate highly with the Estimate of Gains factors (Gonyea et al., 2003). Kuh and Vesper (1997) stated that, "the CSEQ Estimate of Gains scores are consistent with results from achievement tests, and the reliability of responses is high for both Gains and Activities scales" (p. 46).Therefore, the Estimate of Gains factors should accurately depict the self-reported gains students report based on the effort they expended taking advantage of campus resources. With this in mind, the CSEQ was chosen as the most appropriate instrument to measure the self-reported intellectual and personal/social estimate of gains of first-generation first year college students enrolled in First Generation Access Programs.

Data Collection Procedures

As stated earlier in this chapter, the researcher used secondary data for this study. The CSEQ data were collected by student affairs administrators at the university and the researcher for this study. For the data collection procedures by student affairs administrators at the university, students were invited via email by the Vice-President of Student Affairs to participate in the assessment. The students invited to participate in assessment consisted of students who resided in residence halls, involved in student organizations, participants in First Generation Access Programs, athletes and in undergraduate course class sessions. The invitation stated that the survey would take approximately 30 minutes to complete and that it would aid the Division of Student Affairs to better the campus environment and to help in the development of students. The invitation also stated that by completing the survey, there would be an opportunity to win a $100 gift card.

Each student who participated in the assessment had the option of completing the questionnaire in a quiet room or pick up the survey and return it. The participants were asked to show identification and to provide their school identification number. The preceding information was needed to identify participants in case they were randomly selected to win the $100 gift card and to ensure that they would not be contacted to participate in similar surveys.

The invitation to participate in the CSEQ assessment was extended to participants in the FGAP via email and in person by the researcher in this study at one of their group meetings at end of the fall 2010 semester. The surveys were collected and submitted to the Director of Student Affairs Planning, Evaluation & Assessment. The survey data

results from the Background Information and Estimate of Gains sections of the CSEQ completed by the participants in the target population for this study and overall grade point averages (academic success) of the participants was provided by the Director of Student Affairs Planning, Evaluation & Assessment. The information was not identifiable per participant. The process ensured that the participants' records were protected appropriately.

Data Analysis

The data for this study was analyzed using SPSS software. Descriptive statistics, such as applicable measures of standard deviation, central tendency, skewness, and kurtosis was calculated and reported for all variables in this study. Cronbach's Alpha was conducted to measure internal consistency and reliability of the self-reported estimate of intellectual and personal/social gains scores. Overall, inferential statistics was used to test the relationship among all variables. Multivariate Analysis of Variance (MANOVA), Simple Regression, and Pearson's correlation was used to understand the relationship among all variables.

Below is an overview of the analysis procedure that was applied to each research question in addition to the descriptive statistics referred to above.

Question 1: What is the relationship between self-reported intellectual estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was used to analyze the relationship between self-reported intellectual estimate of gains and academic success of FGS enrolled in FGAPs.

A Simple regression analysis was used to determine if self-reported intellectual estimate of gains could predict the academic success of FGS enrolled in FGAPs.

Question 2: What is the relationship between personal/social estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was used to analyze the relationship between self-reported personal/social estimate of gains and academic success of FGS enrolled in FGAPs.

A Simple regression analysis was used to determine if self-reported personal/social estimate of gains could predict the academic success of FGS enrolled in FGAPs.

Question 3: What is the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of first-generation students enrolled in First Generation Access Programs?

A Pearson Product Moment Correlation was used to analyze the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of FGS enrolled in FGAPs.

Question 4: Is there a relationship between both self-reported intellectual and personal/social estimate of gains and academic success based on gender?

A one-way MANOVA was used to analyze the self-reported intellectual and personal/social estimate of gains (dependent variable) and academic success (dependent variable) based on gender (independent variable) and ethnicity (independent variable).

This statistical analysis was used because it determined if differences exist between two or more groups on multiple dependent variables.

Summary

Chapter Three, as written above, described the general methodological approach, research design, population and sample, instruments and data collection procedures, and analytical procedures that were used to measure the self-reported intellectual and personal/social estimate of gains of FGS enrolled in a FGAP at a large metropolitan institution in the South.

CHAPTER FOUR

RESULTS

This chapter reports the research sample, descriptive statistics, results from the analysis, and a summary of the results.

Research Sample

Provided by the Director of Student Affairs Planning, Evaluation & Assessment at the University of South Florida (USF), the CSEQ Assessment Program data used for this study included a sample population of first-generation first-year college students enrolled in First Generation Access programs at USF who completed the CSEQ survey at the end of the fall 2010 semester. The data included a total of 275 participants. After removing data of all participants who did not meet the study's criteria, the resulting sample population size was 184. Data from participants with responses that indicated that they were not first-year first-generation students and participants with missing responses were not used.

Descriptive Statistics

The following descriptive statistics in Table 1 describe the data set in order to provide an understanding of the sample population of first-generation, first-year college students enrolled in First Generation Access programs who participated in the CSEQ survey.

TABLE 1

Descriptive Statistics of Participants in the Sample

Demographic	Category	*N*	Percent %
Age	18 – 19	179	97.3
	20	5	2.7
Marital Status	Not Married	184	100
Gender	Male	66	35.9
	Female	118	64.1
Ethnicity	Mexican American	2	1.1
	Asian	6	3.3
	Other	6	3.3
	Puerto Rican	9	4.9
	Multiracial	10	5.4
	Other Hispanic	25	13.6
	White	41	22.3
	Black	85	46.2
Hours of Study Per Week			
	5 or less	40	21.7
	6-10	61	33.2
	11-15	44	23.9
	16-20	21	11.4
	21 or more	17	9.3

TABLE 1 (Continued)

Descriptive Statistics of Participants in the Sample

Demographic	**Category**	***N***	**Percent %**
Major of Study	Humanities	1	.5
	Mathematics	1	.5
	Recreation/Sports	1	.5
	Management History	2	1.1
	Liberal & General Studies	2	1.1
	Visual & Performing Arts	4	2.2
	Public Administration	6	3.3
	Undecided	6	3.3
	Biological Sciences	8	4.3
	Education	9	4.9
	Communication	17	9.2
	Pre-Professional	21	11.4
	Engineering	23	12.5
	Business	25	13.6
	Health-Related Fields	27	14.7
	Social Sciences	31	16.8

N = 184

Overall, the data show that the majority of first-generation first-year college students enrolled in First Generation Access Programs in this group reported that they are nineteen or younger (97.3%), unmarried (100%), female (64.1%), Black (46.2%), and study mostly between six to ten hours per week (33.2%). The population also frequently

reported majors of study as social sciences (16.8%), health-related fields (14.7%), business (13.6%), engineering (12.5%), and pre-professional (11.4%).

The variables measured in this study are self-reported intellectual estimate of gains, self-reported personal/social estimate of gains, and academic success determined by grade point average (GPA). Academic success is measured by GPA throughout this chapter. The variables, self-reported estimate of gains and academic success, do not account for previous academic ability and performance such as high school grade point average, standardized test scores and the type of high school attended (i.e. college prep). In addition, the instrument used for this study does not account previous intellectual abilities or academic performance. The scale in the CSEQ used to measure both variables, self-reported intellectual and personal/social estimate of gains, was Estimate of Gains. Academic success (i.e. participants' cumulative fall 2010 grade point averages) was provided by the Director of Student Affairs Planning, Evaluation & Assessment at USF. Frequency scores for each question in the Estimate of Gains subscales for intellectual and personal/social gains items are provided respectively in Tables 2 and 3 and in Table 4 for academic success.

Frequency scores for the Estimate of Gains subscale for intellectual gains items and personal/social gains items respectively in Table 2 and Table 3 show clear distinctions in the range of frequency scores for most of the questions asked. Students more frequently reported gaining "quite a bit" and "very much" in intellectual and personal/social development areas listed. Additionally, students less frequently reported "very little" progress in the areas listed in the intellectual and personal/social gains items in Table 2 and Table 3. The frequency of academic success reported in Table 4 shows

that 35.3% of students earned a cumulative fall 2010 grade point average between 3.0 - 3.49 and 30.4% earned a 2.5 -2.99.

TABLE 2

Frequency Scores for Intellectual Estimate of Gains Items

Writing clearly and effectively.	
Very little	8
Some	42
Quite a bit	73
Very much	61
Presenting ideas and information effectively when speaking to others.	
Very little	7
Some	45
Quite a bit	81
Very much	51
Using computers and other information technologies.	
Very little	3
Some	42
Quite a bit	67
Very much	72
Developing good health habits and physical fitness.	
Very little	14
Some	45
Quite a bit	55
Very much	70
Thinking analytically and logically.	
Very little	4
Some	49
Quite a bit	69
Very much	62
Putting ideas together, seeing relationships similarities, and differences between ideas.	
Very little	5
Some	36
Quite a bit	75
Very much	68

TABLE 2 (Continued)

Frequency Scores for Intellectual Estimate of Gains Items

Learning on your own, pursuing ideas, and finding information you need.	
Very little	3
Some	28
Quite a bit	74
Very much	79

N = 184

TABLE 3

Frequency of Scores for Personal/Social Estimate of Gains Items

Developing your own values and ethical standards.	
Very little	5
Some	55
Quite a bit	57
Very much	67
Understanding yourself, your abilities, interests, and personality.	
Very little	5
Some	30
Quite a bit	54
Very much	95
Developing the ability to get along with different kinds of people.	
Very little	6
Some	25
Quite a bit	62
Very much	91
Developing the ability to function as a member of a team.	
Very little	6
Some	43
Quite a bit	58
Very much	77
Learning to adapt to change (new technologies, different jobs, or personal circumstances, etc.).	
Very little	6
Some	25
Quite a bit	76
Very much	77

TABLE 4

Frequency of Academic Success Scores

Academic Success Score	*N*	Percent %
1.21 – 1.99	11	6
2.0 – 2.49	35	19
2.5 – 2.99	56	30.4
3.0 – 3.49	65	35.3
3.5 – 4.00	17	9.2

N = 184

Cronbach's coefficient alpha was computed to measure the internal consistency of the subscales. The goal of these analyses was to establish item homogeneity (i.e. self-report consistency across items) as well to assess the effects of sources of measurements such as scoring errors and guessing made by participants. Reliability coefficients range from .00 to 1.00, no reliability to perfect reliability (Gall, Gall & Borg, 2007). Acceptable reliability coefficients are considered acceptable at scores of approximately .80 or higher. Table 5 provides information about Cronbach's coefficient alpha for each of the subscales, which range between .86 and .92. The highest measurement of Cronbach's $\alpha = .92$ for self-reported intellectual and personal/social estimate of gains indicating that it has the highest quality of internal consistency.

Included in Table 6 are the descriptive statistics and minimum and maximum scores for all participants for each of the variables. The descriptive statistics in Table 6 include the means, standard deviation, skewness, and kurtosis for each variable.

TABLE 5

Cronbach's Coefficient Alpha for Each of the Subscales

Variable	Cronbach α
Self-Reported Intellectual Estimate of Gains	.86
Self-Reported Personal/Social Estimate of Gains	.87
Self-Reported Intellectual and Personal/Social Estimate of Gains	.92

TABLE 6

Descriptive Statistics of the Variables

Variable	Scale	*M*	*SD*	*Sk*	*Ku*	*Min*	*Max*
Intellectual Gains Items	Estimate of Gains	3.07	.62	-.47	.05	1.00	4.00
Personal/Social Gains Items	Estimate of Gains	3.19	.68	-.68	-.14	1.00	4.00
Academic Success	Fall GPA	2.84	.53	-.53	-.01	1.21	3.86

Note: *M* = Means, *SD* = Standard Deviation, *Sk* = Skewness, *Ku* = Kurtosis, *Min* = Minimum Score, *Max* =Maximum Score

Results of Analysis

Research Question One. What is the relationship between self-reported intellectual estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was conducted to determine the relationship between self-reported intellectual estimate of gains and academic success. The researcher obtained the means of the self-reported intellectual estimate of gains scores and academic success (i.e. grade point average) of each participant to process the analyses. The lowest score that could be selected from the Likert scores for each participant on the estimate of gains section of the CSEQ instrument was "1= very little"

and the highest "4 = very much." The grade point average (academic success) of the participants ranged from 1.21 to 4.0. For correlation purposes, a participant who self-reported gaining very little may correspond with a grade point average in the range of 1.21 to 1.99. The test was conducted using an alpha of .05.

The Pearson Product Moment Correlation between self-reported intellectual estimate of gains and academic success was $r = .08$, which was positive, was interpreted as a small to negligible effect size (Cohen, 1988), and was a non-significant correlation of $r = .08$, p = n.s., as shown in Table 7. In reference to the Pearson Product Moment critical r table, for a population size of 184 for this study, the Pearson Product Moment needed to be at least $r = .15$, $p = .05$ to be a relevant correlation. Therefore, there is a very weak, positive correlation between self-reported intellectual estimate of gains and academic success of first-generation students in First Generation Access Programs.

TABLE 7

Correlation between Self-Reported Intellectual Estimate of Gains & Academic Success

Description		Self-Reported Intellectual Estimate of Gains
Academic Success (GPA)	Pearson *r*	.08
	p value	.30

In addition, the researcher conducted a simple linear regression analysis to determine if academic success could be predicted from self-reported intellectual estimate of gains scores. The data was screened for missingness and violation of assumptions prior to analysis. There were no missing data. The assumptions include linearity, normality, independence, homogeneity of variance.

Linearity: The scatterplot of the independent variable (self-reported intellectual estimate of gains) and the dependent variable (academic success) indicates that the assumption of linearity is reasonable – as self-reported intellectual estimate of gains scores increases, academic success generally increase as well (Figure 4).

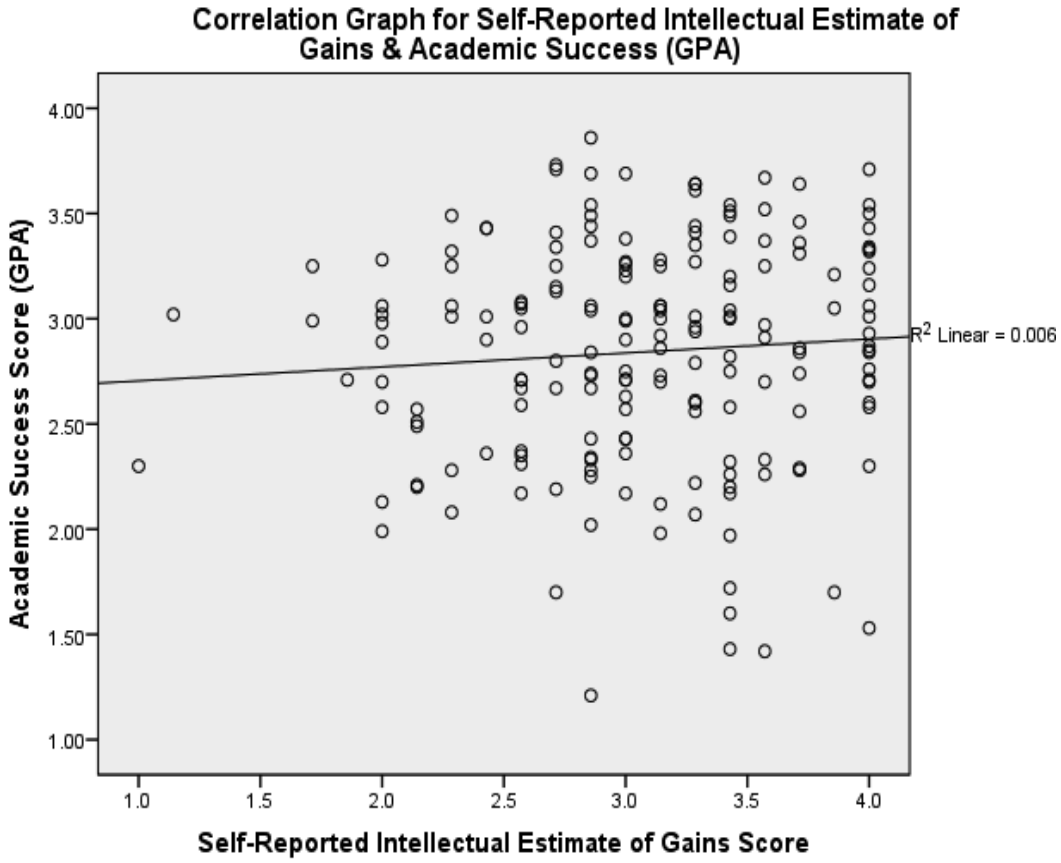

FIGURE 4. *Correlation Graph for Self –Reported Intellectual Estimate of Gains & Academic Success (GPA).*

Normality: The Normal P-Plot of Regression Standardized Residuals was completed to check the assumption that the residuals are normally distributed. The Normal P-Plot of Regression Standardized Residual concludes that the residuals are normally distributed (Figure 5).

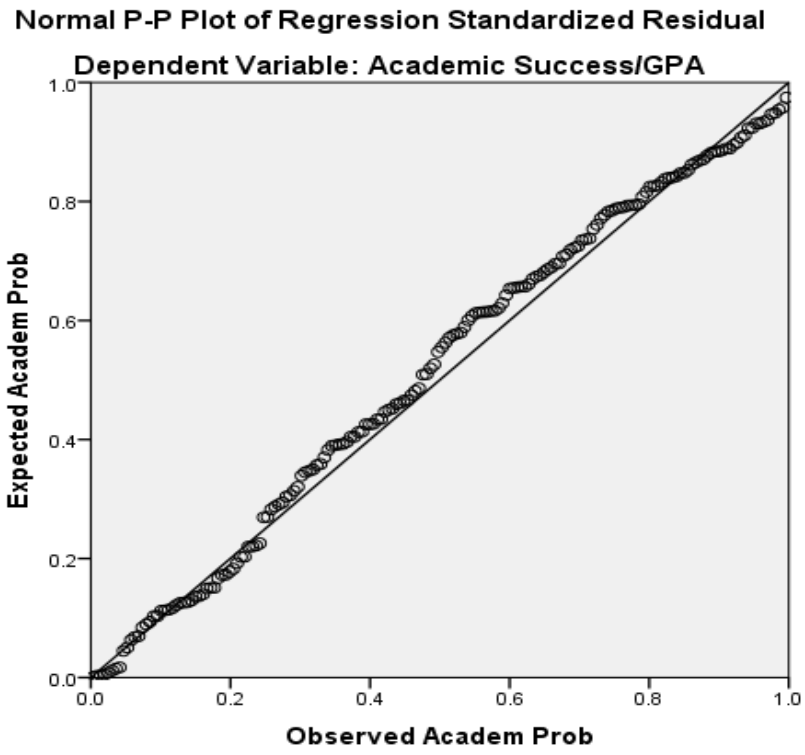

FIGURE 5. *Normal P-Plot of Regression Standardized Residual for Dependent Variable Academic Success/GPA.*

Independence: A relatively random display of points in the scatterplot of studentized residuals against values of the independent variable provided evidence of independence. The Durbin-Watson statistic was computed to evaluate independence of errors and was 1.73, which is considered acceptable. This implies that the assumption of independent errors has been met.

Homogeneity of variance: The spread of residuals appears fairly constant over the range of values of self-reported intellectual estimate of gain scores. A relatively random display of points, provides evidence of homogeneity of variance.

The Simple Linear Regression analyses suggest that a non-significant proportion of the total variation in academic success was predicted by self-reported intellectual estimate of gains. In other words, a student's self-reported intellectual estimate of gains

score is not a good predictor of their academic success, $F(1, 182)= 1.11$, $p > .001$. Additionally, the researcher found the following: (a) the unstandardized slope (b = .07) and standardized slope (β = .08) are not statistically significantly different from 0 (t = 1.05, df = 1, $p > .001$); for every unit increase in self-reported intellectual estimate of gains score, academic success is predicted to increase by .07, which is very little. The unstandardized slope of .07 tells us that a student's grade point average, academic success, increases by about .07 points for every additional point on their self-reported intellectual estimate of gain score. The standardized slope suggests that for each standard deviation unit of increase in self-reported intellectual estimate of gains score, we predict a slight increase of .08 of a standard deviation increase in academic success.

The relationship between self-reported intellectual estimates of gains and academic success is 0. Multiple R^2 indicates that approximately 1% of the variation in academic success was predicted by self-reported intellectual of gains scores. According to Cohen (1988), this suggests an extremely small effect. The sample population size requirement was met for simple linear regression with a size of 184. It was over 106 (number of independent variables (1) + 105).

TABLE 8

Summary of Simple Linear Regression Analyses for Self-Reported Intellectual Estimate of Gains Predicting Academic Success

	Academic Success				
Variable	R^2	*B*	B	T	*P*
Self-Reported Intellectual Estimate of Gains	.01	.07	.08	1.05	.30

N = 184

Research Question Two. What is the relationship between self-reported personal/social estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was conducted to determine the relationship between self-reported personal/social estimate of gains and academic success. The researcher obtained the means of the self-reported personal/social estimate of gains scores and academic success, grade point average, of each participant to process the analyses. The lowest score that could be selected from the Likert scores for each participant on the estimate of gains section of the CSEQ instrument was "1= very little" and the highest "4 = very much." The grade point average (academic success) of the participants ranged from 1.21 to 4.0. For correlation purposes, a participant who self-reported gaining very little may correspond with a grade point average in the range of 1.21 to 1.99. The test was conducted using an alpha of .05.

The Pearson Product Moment Correlation between self-reported personal/social estimate of gains and academic success was $r = .02$, which was positive, was interpreted as a small to negligible effect size (Cohen, 1988), and was a non-significant correlation of $r = .02$, p = n.s., as shown in Table 9. In reference to the Pearson Product Moment critical r table, for a sample size of 184 for this study, the Pearson Product Moment needed to be at least $r = .15$, $\alpha = .05$ to be a relevant correlation. Therefore, there is a very weak, positive correlation between self-reported personal/social estimate of gains and academic success of first-generation students in First Generation Access programs.

In addition, the researcher conducted a simple linear regression analysis to determine if academic success could be predicted from self-reported personal/social

estimate of gains scores. The data was screened for missingness and violation of assumptions prior to analysis. There were no missing data. The assumptions include linearity, normality, independence, homogeneity of variance.

TABLE 9

Correlation between Self-Reported Personal/Social Estimate of Gains and Academic Success (GPA)

Description		Self-Reported Personal/Social Estimate of Gains
Academic Success (GPA)	Pearson r	.02
	P value	.82

N = 184

Linearity: The scatterplot of the independent variable (self-reported personal/social estimate of gains) and the dependent variable (academic success) indicates that the assumption of linearity is reasonable – as self-reported personal/social estimate of gains scores increases, academic success generally increase as well (Figure 6).

Normality: The Normal P-Plot of Regression Standardized Residuals was completed to check the assumption that the residuals are normally distributed. The Normal P-Plot of Regression Standardized Residual concludes that the residuals are normally distributed (Figure 7).

Independence: A relatively random display of points in the scatterplot of studentized residuals against values of the independent variable provided evidence of independence. The Durbin-Watson statistic was computed to evaluate independence of errors and was 1.75, which is considered acceptable. This implies that the assumption of

independent errors has been met.

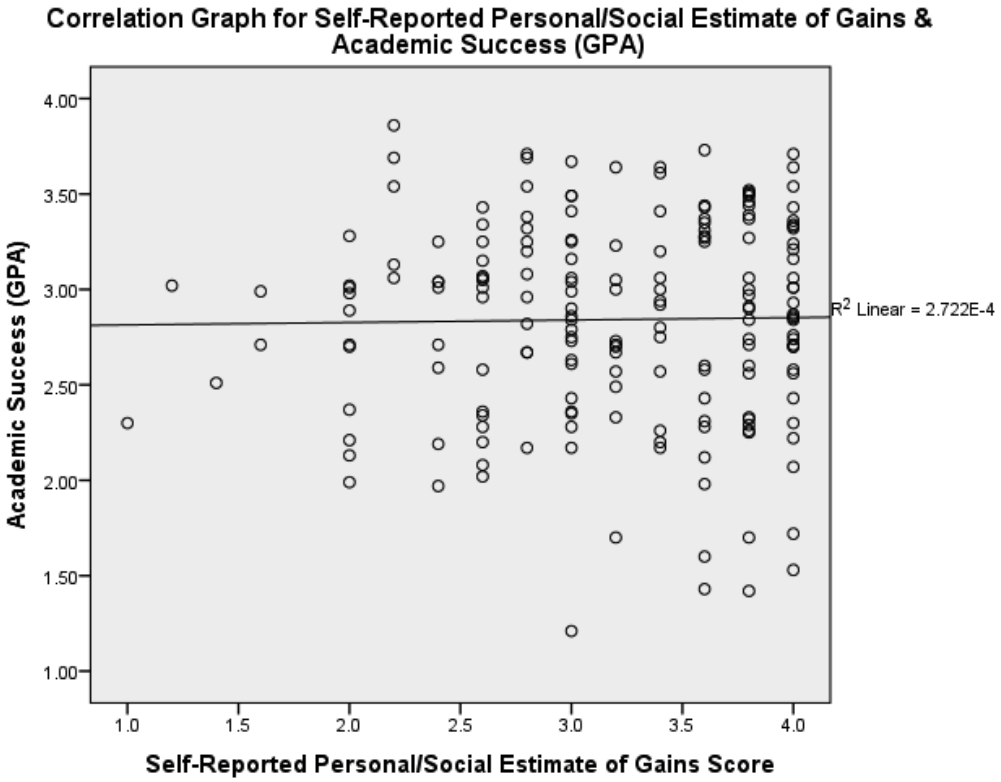

FIGURE 6. *Correlation Graph for Self-Reported Personal/Social Estimate of Gains & Academic Success (GPA).*

Homogeneity of variance: The spread of residuals appears fairly constant over the range of values of self-reported personal/social estimate of gain scores. A relatively random display of points, provide evidence of homogeneity of variance.

The Simple Linear Regression analyses suggest that a non-significant proportion of the total variation in academic success was predicted by self-reported personal/social estimate of gains. In other words, a student's self-reported personal/social estimate of gains score is not a good predictor of their academic success, $F(1, 182)= .05$, $p > .001$.

Additionally, the researcher found the following: (a) the unstandardized slope (b = .01) and standardized slope (β = .02) are not statistically significantly different from 0 (t = .22, df = 1, p > .001); for every unit increase in self-reported personal/social estimate of gains score, academic success is predicted to increase by .01, which is very little. The unstandardized slope of .01 tells us that a student's grade point average, academic success, increases by about .01 points for every additional point on their self-reported personal/social estimate of gain score. The standardized slope suggest that for each standard deviation unit of increase in self-reported personal/social estimate of gains score, we predict a slight increase of .02 of a standard deviation increase in academic success.

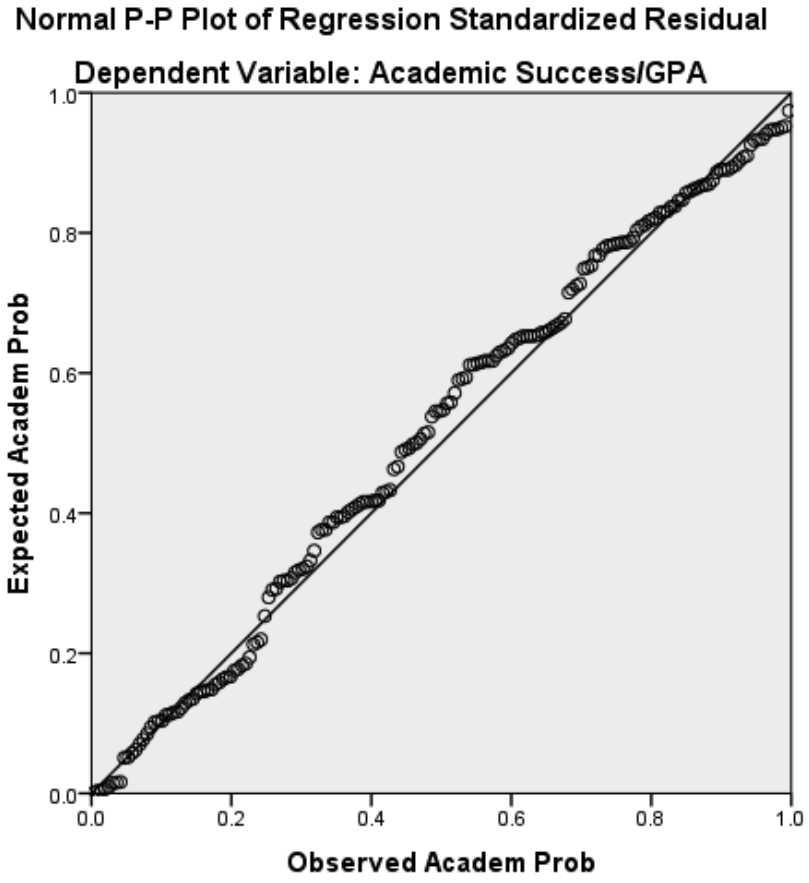

FIGURE 7. *Normal P-Plot of Regression Standardized Residual for Dependent Variable Academic Success/GPA.*

The relationship between self-reported personal/social estimates of gains and academic success is 0. Multiple R^2 indicates that approximately 0% of the variation in academic success was predicted by self-reported personal/social estimate of gains scores. According to Cohen (1988), this suggests an extremely small effect. The sample size requirement was met for simple linear regression with a size of 184. It was over 106 (number of independent variables (1) + 105).

TABLE 10

Summary of Simple Linear Regression for Self-Reported Personal/Social Estimate of Gains Predicting Academic Success

	Academic Success				
Variable	R^2	*B*	B	*T*	*p*
Self-Reported Personal/Social Estimate of Gains	.00	.01	.02	.22	.82

N = 184

Research Question Three. What is the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of first-generation students enrolled in First Generation Access programs?

The researcher conducted a Pearson Product Moment Correlation in order to address this question. A Pearson Product Moment Correlation was used to analyze the data in an effort to identify a relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of first-generation students enrolled in First Generation Access programs. According to Gall et al. (2007), "correlation coefficients are best used to measure the degree and direction (i.e., positive or negative) of the relationship between two or more variables" (p. 336). The means of

both variables were obtained for this statistical analysis. Results revealed that there is a statistically significant positive correlation between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains. The correlation between self-reported intellectual and personal/social estimate of gains was $r = .80$, $p < .001$) as shown in Table 11 and Figure 8.

TABLE 11

Correlation between Self-Reported Intellectual and Personal/Social Estimate of Gains

Description		Self-Reported Intellectual Estimate of Gains
Self-reported Personal/Social Estimate of Gains	Pearson *r*	.80
	p value	.00

N = 184

FIGURE 8. Correlation Graph for Self-Reported Intellectual & Self-Reported Personal/Social Estimate of Gains.

Research Question Four. Is there a difference between self-reported intellectual and personal/social estimate of gains and academic success based on gender and ethnicity?

To address this question, descriptive statistics were obtained and a one-way MANOVA was conducted to determine if gender has an effect on self-reported intellectual and personal/social estimate of gains and academic success. In order to conduct the MANOVA statistical test, the researcher first examined the assumptions of the MANOVA, which are multivariate normality, homogeneity of covariance and independence assumptions.

To test for the multivariate normality, the skewness and kurtosis of the dependent variables based on gender were examined. Information for skewness, kurtosis, and Shapiro-Wilks' for each dependent variable, are shown as in Table 12.

TABLE 12

Distribution of Normality for Gender

Variable	Gender	*N*	*M*	*SD*	Sk	Ku	*Wilk's*Λ
Self-Reported Intellectual Estimate of Gains	Male	66	2.97	.65	-.76	.66	$p = .01$
	Female	118	3.12	.60	-.24	-.63	$p < .01$
Self-Reported Personal/Social Estimate of Gains	Male	66	3.03	.75	-.62	-.16	$p < .01$
	Female	118	3.27	.63	-.62	-.47	$p < .01$
Academic Success	Male	66	2.72	.6	-.40	-.38	$p > .05$
	Female	118	2.91	.48	-.48	.04	$p > .01$

N =184

The results show that both skewness and kurtosis for each dependent variable based on gender is approximately normal. However, the skewness for all the variables is negative, which indicates that there are more scores above the means for all the dependent variables. Also, a negative kurtosis for all the dependent variables based on gender, except female academic success, reveal that each score is playtkurtic with approximately few outliers and extreme values that fall outside of the normal distribution. The *p*-value for the Shapiro-Wilks test is greater than .05 for male academic success, greater than .01 for female academic success and equal to .01 for male self-reported intellectual estimate of gains score, which indicates that the data is normally distributed for each of these groups. However, the p-value for the Shapiro-Wilks' test is less than .05 ($p < .01$) for female self-reported intellectual estimate of gains scores and both male and female self-reported estimate of gains scores, which shows that the data are not normally distributed for gender in these groups. Still, the multivariate normality assumption has not been violated because skewness and kurtosis for each dependent variable based on gender is less than one.

The researcher also examined the homogeneity of covariance by conducting the Box's Test of Equality of Covariance Matrices. The test indicate that there is no statistically significant differences ($p > .001$) in the covariance across levels of the independent variable, gender, that may indicate an increased probability of a Type I error. The group's covariance is equal ($F(6,179) = 2.76$, $p = .011$) as shown in Figure 9.

Box's Test of Equality of Covariance Matrices[a]

Box's M	16.879
F	2.757
df1	6
df2	119454.524
Sig.	.011

FIGURE 9. *Box Test of Equality of Covariance Matrices*

The last assumption that was examined for the MANOVA was the independence assumption. As indicated in Chapter Three of the study, students who participated in the CSEQ survey completed the survey in a quiet room with clear instructions to respond to survey questions based on their own experience during the current school year.

The results of the one-way MANOVA revealed a significant multivariate main effect for gender (*Wilks* $\Lambda = .94$, $F(3,180) = 3.75$, $p < .05$) (See Table 13). The observed effect size of this relationship was = .06. Therefore, the researcher concluded that first-generation students' self-reported intellectual and personal/social estimate of gains score and academic success were significantly dependent on gender ($p < .05$). Power to detect the effect was .80, at an alpha level of .05 and a sample size of 184. Therefore, there is 20 % chance of failing to detect an effect that is present. With this in mind, it is reasonable to conclude that there is a significant difference. Table 13 shows the MANOVA information for gender. A post-hoc analysis of variance (ANOVA) was done since the MANOVA indicated a significant multivariate main effect for gender across the dependent variables.

TABLE 13

MANOVA Table for Gender

Effect	*Wilks'* Λ	*F*	*df*	*p*	η^2	Observed Power
Gender	.94	3.75	3,180	<.01	.06	.80

N = 184

Levene's test for homogeneity of variances for the variables was conducted prior to executing the ANOVA. Both variables were not significant, meaning that the group variances were not equal as shown in Table 14. Therefore, the researcher did not test for pairwise group means.

TABLE 14

Levene's Test of Equality of Error Variances

Dependent Variable	*p*-value
Self-Reported Personal/Social Estimate of Gains	.24
Academic Success	.03

N = 184

Given the significance of the MANOVA, the univariate main effects/analysis of variance (ANOVA) was examined. In order to identify the association of self-reported intellectual and self-reported personal/social estimate of gains and academic success with gender, multiple ANOVA tests were performed. The Type I error alpha protection provided by the overall F test does not extend to the univariate main effects' test/multiple ANOVA tests. Therefore, the researcher conducted a Bonferroni correction by dividing α (.05) by the number of ANOVA tests (3) that were performed. For example, for the three dependent variables, the researcher required that $p < .02$ (.05/3 = .02).

The results indicated moderate significant main effects were observed for two dependent variables (self-reported personal/social estimate of gains and academic success). A significant main effect was revealed for self-reported personal/social estimate of gains, $F(1,182) = 5.42$, $p = .02$, $\eta^2 = .03$, between males ($M = 3.03$, $SD = .75$) and females ($M = 3.27$, $SD = .63$). There was also a significant main effect reported for academic success, $F(1,182) = 5.24$, $p = .02$, $\eta^2 = .03$, between males ($M = 2.72$, $SD = .60$) and females ($M = 2.91$, $SD = .48$). No significant difference ($F(1,182) = 2.40$, $p = .12$, n2 = .01) was found on self-reported intellectual estimate of gains for males ($M = 2.97$, $SD = .65$) and females ($M = 3.12$, $SD = .60$)(Table 15). Since there were statistically significant results from the multiple ANOVA tests, the researcher performed a post hoc analysis for self-reported personal/social estimate of gains and academic

TABLE 15

ANOVA Results for Gender on Dependent Variables
success.

Dependent Variable	Mean	*SD*	*df*	*F*	*P*	η^2	Observed Power
Self-Reported Intellectual			1,180	2.4	.12	.01	.34
Male	2.97	.65		0			
Female	3.12	.60					
Self-Reported Personal/Social			1,180	5.4	.02	.03	.64
Male	3.03	.75		2			
Female	3.27	.63					
Academic Success			1,180	5.2	.02	.03	.63
Male	2.72	.60		4			
Female	2.91	.48					

Note: *N = 184*, *SD* = Standard Deviation, *df* = degrees of freedom

Summary of Results

In summation, the data analyzed were of a population of 184 first-generation first-year college students enrolled in First Generation Access programs. The majority of the students were female (64.1%), Black (46.2%), earned a cumulative grade point average in the range of 3.0 - 3.49 (35.3%) study 6-10 hours a week (33.2%), and reported Social Sciences (16.8%) as the major of study.

Overall, self-reported intellectual estimate of gains and personal/social estimate of gains had the strongest relationship (r = .80) for the participants in this sample. The mean score for both variables was respectively 3.07 and 3.19. Though academic success was positively correlated to self-reported intellectual (r = .08) and personal/social estimate of gains (r = .02), the measures were not statistically significant. The Pearson Product Moment critical r needed to be at least .15 for the number of participants (N =184) in this sample. In addition, academic success was predicted to increase by .07 and .01 for every unit increase respectively in self-reported intellectual estimate of gains and self-reported personal/social estimate of gains.

The results of the MANOVA for the research Question Four revealed that there was a significant multivariate main effect on gender (*Wilks* Λ = .94, $F(3,180) = 3.75$, $p <$ .05, η^2=. 06) across the dependent variables (self-reported intellectual and personal/social estimate of gains and academic success). Therefore, the dependent variables were significantly dependent on gender. The follow-up tests revealed that there were significant univariate main effects on gender for self-reported estimate of gains and academic success. However, Levene's test for homogeneity revealed that the variables

had unequal variance. Therefore, they were not significantly different so the researcher did not conduct further analysis.

Summary

Chapter Four displays the current data analysis for this research study. Chapter Five will provide the principle findings of the research questions, discussion of results, recommendations for practice and for future research, and the conclusion of this study.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

Introduction

In this chapter, the researcher provides principle findings of the research questions and the conclusion of the study. A discussion of results, recommendation for practice, and recommendation for future research are outlined here.

The purpose of this study was to examine the relationship between the self-reported intellectual and personal/social estimate of gains and the academic success among first-generation, first-year college students participating in First Generation Access programs at a large metropolitan institution in the south. First-generation students come to college with a variety of problems such as intellectual development (Ishitani, 2006 and Saenz, Hurtado, Barrerra, Wolf, & Yeung, 2007) and a scarcity of social networks (Ishitani et al, 2001), which make their transition into institutions of higher learning extremely difficult. With this in mind, identifying the effects of self-reported intellectual gains and personal/social gains of first-generation, first-year college students enrolled in First Generation Access Programs on academic success have many implications. This study used college impact models to guide this research. According to Kuh (1995), Astin's Inputs-Environment-Outcomes Model (1991) and Tinto and Pusser's Model of Institutional Action for Student Success (2006) have been used to validate "outcomes produced by interactions between students and their institution's

environments, broadly defined. Thus, learning and personal development are a function of reciprocal influences among such institutional characteristics as size and control, such student characteristics as sex and ethnicity, and enacted perceptual and behavorial environments produced through contacts with peers, faculty, staff, and others including the types of activities in which student engage" (p. 126 - 127).

However, little research could be found that examined the relationship and instrumentation of programs and strategies that work to assist first-generation students enrolled in First Generation Access programs with their transition to college. Utilizing secondary data from the CSEQ Assessment Program that was collected from a sample of 792 students enrolled at a large metropolitan predominantly White institution in the south from fall 2010 semester, information from 184 participants was included in the study.

Among the first-generation, first–year college students enrolled in First Generation Access Programs who participated in this study:

- 64.1% were female;
- 46.2 % were Black;
- 35.3% earned a cumulative grade point average in the range of 3.0 – 3.49;
- 33.2% study 6-10 hours a week;
- 16.8% reported Social Sciences as the major of study.

The frequency score ratings 1 = *Very little*, 2 = *Some*, 3 = *Quite a bit*, and 4 = *Very much* for each of the questions in both the Self-Reported Intellectual and Self-Reported estimate of gains subscales were obtained. There were clear distinctions in frequency scores for questions in both Self-Reported Intellectual and Self-Reported estimate of gains subscales. For the Self-Reported Intellectual Estimate of Gains items,

fewer students (1.6%) equally reported that they gained very little in using computers and other information technologies and learning on your own, pursuing ideas, and finding information they need. More students (44%) reported that they gained quite a bit in presenting ideas and information effectively when speaking to others. Overall, the mean for self-reported intellectual estimate of gains score was 3.07.

This could suggest that some participants in the study had previous knowledge and skills with technology and view themselves as independent learners. It could also suggest that the participants were not aware of adequately gaining in the respective areas. In lieu of the review of literature, this population shows signs of over-optimism, which leads to inaccurate preparedness and prediction of final course grades (Garavalia et al, 2004 & Hacker et al, 2000). Hence, the mean grade point average of the group is 2.84. In addition, almost half of the participants reported gaining quite a bit in communicating effectively with others and the mean score for the self-reported intellectual gains score was 3.07.

For the Self-Reported Personal/Social Estimate of Gains items, fewer students (2.7%) equally reported that they gained very little in developing their own values and ethical standards and understanding self, their abilities, interests, and personality. More students (51.6%) reported that they gained very much in understanding self, their abilities, interests, and personality. In addition, 49.5% of students reported that they gained in developing the ability to get along with different kinds of people. Overall, the mean for Self-Reported personal/social estimate of gains score was 3.19.

A mean Likert score of 3.19 suggests that the population gained “quite a bit” in personal/social estimate of gains. As stated in Chapter Two, lack of social capital result

in less social networking knowledge and skills and a reduced ability to better understand self. The students reported gaining immensely in this area. With this in mind, the students perceived that they have gained social networking knowledge, which supports Ishitani et al, 2001 in the review literature that state "levels of academic and social integration ultimately enhance a student's overall experience" (p. 1).

The frequency of the academic success scores, which was determined by the participants' cumulative fall 2010 grade point average, reported 6% in the range of 1.21 – 1.99 while 35.3% reported in the range of 3.0 – 3.49. In addition, for academic success frequency scores, 30.4% were in the range of 2.5 – 2.99. Overall, the mean for academic success was 2.84. Therefore, most of the students earned a B- to B+ grade point average.

Principle Findings and Discussion of Results

This research used four research questions to determine the relationships of self-reported intellectual and self-reported personal/social estimate of gains to academic success of first-generation, first-year college students participating in First Generation Access Programs.

Findings for Research Question One. The first research question focused on academic success (cumulative GPA) and the relationship to self-reported intellectual estimate of gains scores on the CSEQ. The research question was stated as follows: What is the relationship between self-reported intellectual estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was used to analyze the data in an effort to identify the relationship between self-reported intellectual estimate of gains scores on the CSEQ and academic success as measured by the participants' fall 2010 cumulative

GPA. The lowest score that could be selected from the Likert scores for each participant on the estimate of gains section of the CSEQ instrument was "1= very little" and the highest "4 = very much." The grade point average (academic success) of the participants ranged from 1.21 to 4.0. For correlation purposes, a participant who self-reported gaining very little may correspond with a grade point average in the range of 1.21 to 1.99. There was not a significant relationship found (p = n.s) between the self-reported intellectual estimate of gains and academic success.

There was a non-significant, positive correlation between self-reported intellectual estimate of gains scores (r = .08, p = .30) and academic success. The correlation coefficient suggests a very small to negligible magnitude of effect using Cohen's (1988) scale. With this in mind, the very small to negligible effect size indicates that the relationship between total self-reported intellectual estimate of gains scores and academic success has a very minimal to no relationship.

In addition, a simple linear regression analysis was used to determine the amount of variance of academic success that could be predicted from self-reported intellectual estimate of gains scores. The analysis revealed that the self-reported intellectual estimate of gains score is not a good predictor of academic success, $F(1,182)=1.11$, $p > .001$. Academic success (cumulative GPA) is predicted to increase by .07 for every additional point on their self-reported intellectual of gains score. Furthermore, self-reported intellectual estimate of gains scores predicted approximately 1% of the variation in academic success.

The findings of research Question One indicate that first-generation, first-year college students participating in First Generation Access Programs self-reported

intellectual estimate of gains are not correlated to their academic success as measured by grade point average. The findings suggest that self-reported intellectual estimate of gains could not be used as a predictor for academic success as measured by grade point average. While the mean for the self-reported intellectual estimates of gains subscale is equivalent to a Likert score of 3, interpreted as "Quite a bit," the variable did not have a significant correlation to academic success. Therefore, the students reported that they made gains but it did not contribute to their academic success. It could also suggest that academic success is not substantiated by grade point average for first generation, first-year students who participate in First Generation Access Programs. With this in mind, it might be concluded that using grade point average as a measure of academic success for first-generation, first-year college students' self-reported intellectual and personal/social estimate of gains scores is not effective. Also, it might be concluded that there are other influences that affect the relationship between self-reported intellectual estimate of gains and academic success such as the impact of ability (i.e. high school grade point average, standardized test scores and pre-college cognitive skills). Another factor that may have influenced the lack of correlation may have resulted from the participants' inability to fully comprehend the questions for the estimate of gains' items on the CSEQ. There may be another test to associate self-reported intellectual gains to academic success but not in the form of grade point average (i.e. enhance cognition and emotional/social intelligence).

Findings for Research Question Two. The second research question focused on academic success (cumulative GPA) and its relationship to self-reported personal/social estimate of gains scores on the CSEQ. The research question was stated as follows: What

is the relationship between self-reported personal/social estimate of gains and academic success of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was used to analyze the data in an effort to identify the relationship between self-reported personal/social estimate of gains scores on the CSEQ and academic success as measured by the participants' fall 2010 cumulative GPA. The lowest score that could be selected from the Likert scores for each participant on the estimate of gains section of the CSEQ instrument was "1= very little" and the highest "4 = very much." The grade point average (academic success) of the participants ranged from 1.21 to 4.0. For correlation purposes, a participant who self-reported gaining very little may correspond with a grade point average in the range of 1.21 to 1.99. There was not a significant relationship found (p = n.s) between the self-reported personal/social estimate of gains and academic success.

There was a non-significant, positive correlation between self-reported personal/social estimate of gains scores (r = .02, p = .82) and academic success. The correlation coefficient suggests a negligible magnitude of effect using Cohen's (1988) scale. With this in mind, the very small to negligible effect size indicates that the relationship between total self-reported personal/social estimate of gains scores and academic success has a very minimal to no relationship.

In addition, a simple linear regression analysis was used to determine the amount of variance of academic success that could be predicted from self-reported personal/social estimate of gains scores. The analysis revealed that self-reported personal/social estimate of gains score is not a good predictor of academic success, $F(1,182) = .05$, $p > .001$. Academic success (cumulative GPA) is predicted to increase by

.01 for every additional point on their self-reported personal/social estimate of gains score. Furthermore, self-reported personal/social estimate of gains scores predicted approximately 0% of the variation in academic success.

The findings of research Question Two indicate that first-generation, first-year college students participating in First Generation Access Programs self-reported person/social gains are not correlated to their academic success as measured by grade point average. The findings also suggest that self-reported personal/social estimate of gains could not be used as predictor for academic success as measured by grade point average. While the means for self-reported personal/social estimates of gains subscale is equivalent to a Likert score of 3, interpreted as "Quite a bit," the variable did not have a significant correlation to academic success. Therefore, the students reported that they made gains but it did not attribute to their academic success. It could also suggest that academic success is not substantiated by grade point average for first generation, first-year students who participate in First Generation Access Programs. With this in mind, it might be concluded that using grade point average as a measure of academic success for first-generation, first-year college students' self-reported personal/social estimate of gains scores is not effective. Another factor that may have influenced the lack of correlation may have resulted from the participants' inability to fully comprehend the questions for the estimate of gains' items on the CSEQ. There may be another test to associate self-reported personal/social gains to academic success but not in the form of grade point average (i.e. enhanced cognition and emotional/social intelligence).

Findings for Research Question Three. The third research question focused on the self-reported intellectual estimate of gains scores and the relationship to self-reported

personal/social estimate of gains scores on the CSEQ. The research question was stated as follows: What is the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains of first-generation students enrolled in First Generation Access programs?

A Pearson Product Moment Correlation was used to analyze the data in an effort to identify the relationship between self-reported intellectual estimate of gains scores and self-reported personal/social estimate of gains scores on the CSEQ. There was a statistically significant relationship found ($p < .001$) between the self-reported intellectual estimate of gains scores and the self-reported personal/social estimate of gains scores.

There was a significant, positive correlation between self-reported intellectual estimate of gains scores ($r = .80$, $p < .001$) and self-reported personal/social estimate of gains scores. The correlation coefficient suggests a large magnitude of effect using Cohen's (1988) scale. The large effect size indicates that the relationship between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains scores has a strong relationship.

The findings of this study revealed a strong positive correlation between self-reported intellectual estimate of gains and self-reported personal/social estimate of gains scores. Myers and Schirm (1999) contend that First Generation Access Programs help less academically and more socially**.** This could suggest that as students gain intellectually, they gain personally/socially. The correlation of the variables and reported gains support the review of literature which states that students enrolled in such programs perceive to have benefited from the program's ability to increase self-confidence and community development (Phillips, 2008 & York & Tross, 1994).

Findings for Research Question Four. The final research question was "Is there a relationship between both self-reported intellectual and personal/social estimate of gains and academic success based on gender?" The research question examined the relationships between gender, academic success, self-reported intellectual and self-reported personal/social estimate of gains scores on the CSEQ. A One-Way MANOVA was conducted to answer the following question: Is there a difference between self-reported intellectual and personal/social estimate of gains and academic success based on gender?

Differences in means of self-reported intellectual and self-reported personal/social estimate of gains scores and academic success were measured with respect to gender. The results revealed a significant multivariate effect in the dependent variables based on gender (*Wilks* $\Lambda = .94$, $F(3,180) = 3.75$, $p < .05$, $\eta^2 =. 06$) (See Table 14). Follow-up ANOVA tests indicated moderate significant main effects for two dependent variables (self-reported personal/social estimate of gains and academic success). Self-reported personal/social estimate of gains indicated a significant main effect, $F(1,182) = 5.42$, $p = .02$, η^2n2 =. 03, between males ($M = 3.03$, $SD = .75$) and females ($M = 3.27$, $SD = .63$). Academic success also indicated a significant main effect, $F(1,182) = 5.24$, $p = .02$, $\eta^2 = .03$, between males ($M = 2.72$, $SD = .60$) and females ($M = 2.91$, $SD = .48$). No significant difference, $F(1,182) = 2.40$, $p = .12$, $\eta^2 = .01$) was found on self-reported intellectual estimate of gains on males ($M = 2.97$, $SD = .65$) and females ($M = 3.12$, $SD = .60$)(Table 15). Follow-up tests revealed that self-reported estimate of gains and academic success had unequal variances. With this in mind, the researcher did not do an analysis to contrast means by conducting pairwise group means tests.

Findings of this study suggest that females had stronger relationships than males to the variables used in this study. Females reported gaining more intellectually and socially. They earned higher cumulative grade point averages than the males in this study. As previously mentioned, Astin (1991) indicated that "potential interaction effects with environmental variables are the student's gender, ethnicity, age, ability, and socioeconomic level" (p. 67). As such, findings indicate that the gender of first-generation, first-year student enrolled in First Generation Access Programs could be used as a predictor for self-reported intellectual and personal/social estimate of gains and academic success.

Recommendation for Practice

As a result of this study, a number of recommendations are offered to higher education administrators and student affairs professionals to enhance the collegiate experience and retain first-generation, first-year college students at institutions of higher education.

Despite a lack of correlation between both self-reported intellectual and personal/social estimate of gains and academic success, the means for the estimates of gains scores were 3, which equates to 'Quite a bit' (low = 1 to a high = 4). In addition, there was not a significant increase of academic success on either self-reported intellectual or personal/social estimate of gains. For these reasons, the recommendations for practice are as follows:

1. Higher education administrators and student affairs professionals need to investigate alternative methods to measure the academic success of first-generation, first-year students enrolled in First Generation Access Programs.
2. Higher education administrators and student affairs professionals need to investigate why there is a noticeable difference in academic success as measured by grade point average and personal/social estimate of gains between first-generation, first-year males and females enrolled in First Generation Access Programs. According to this research study, males self-reported gaining less and earned lower cumulative grade point averages than females. The findings were as followed: self-reported personal/social estimate of gains - males (M = 3.03) and females (M = 3.27) and academic success - males (M = 2.72) and females (M = 2.91).

3. Higher education administrators and student affairs professionals need to investigate ways to utilize first-generations students "cultural wealth" to aid in increasing the retention and graduation rates of this population of students. Jehangir (2010) contend that first-generation students embody "cultural wealth" which is described as the persistence and resiliency that these students have gained from all of their experiences.

Recommendation for Future Research

The following are several recommendations for future research that would enhance the understanding of the phenomena presented in this dissertation:

1. Future research should be considered to determine a more complete definition of academic success; one that incorporates factors in addition to grade point average.
2. Future research should be considered to compare the self-reported intellectual and personal/social estimates of gains of first-generation first-year students enrolled in First Generation Access Programs to first-generation first-year students who are not enrolled in First Generation Access Programs.
3. Future research should be considered to compare the self-reported intellectual and personal/social estimates of gains of first-generation first-year students enrolled in First Generation Access Programs to traditional first-year students.
4. Future research should be considered to conduct a qualitative longitudinal study to determine what specific factors (i.e. persistence) affect self-reported intellectual and personal/social estimate of gains as well academic success as measured by grade point average.

5. Future research should be considered to control for previous academic ability and performance such as high school grade point average, standardized test scores and the type of high school attended (i.e. college prep).
6. Future research should be considered to explore the relationship between high school and college grade point average and estimate of gains of first-generation first-year college students enrolled in First Generation Access Programs.
7. Future research should be considered to investigate what aspects of services such as tutoring, mandatory one-on-one advising sessions, summer residential learning community, and strategic learning course that are provided by First Generation Access Programs enhance intellectual and personal/social growth and development.
8. Further research should be considered to determine if peer counselors employed by First Generation Access Programs have an effect on the personal/social estimate of gains scores of first-generation students. The literature suggests that "peer-group associations appear to be most directly related to individual social integration" (Tinto, 1975, p. 110).

Conclusion

This correlational quantitative study examined the relationship of perceived intellectual and social attainment to academic success (measured by grade point average) of first-generation, first-year college students participating in First Generation Access Programs at a large metropolitan university in the South. This study was intended to advance understanding of self-reported intellectual and personal/social estimate of gains

and academic success of first-generation, first-year college students enrolled in First Generation Access Programs. Understanding the self-reported intellectual and personal/social gains of these students in higher education can lead to higher retention rates and programs that better serve and meet the needs of this at-risk student population. Particularly, this study was intended to add to the literature to assist higher education administrators and student affairs professionals with strategies and programs to assist this population of students with their transition to college.

Theoretical frameworks were used to provide an understanding of perceived intellectual and personal/social attainment and academic success of first-generation first-year students enrolled in First Generation Access Programs for the context of this study. According to Kuh (1995) college impact models like Astin and Tinto and Pusser, have been used to assist higher education professionals in understanding "outcomes produced by interactions between students and their institutions' environments…" (p. 126 – 127). In the context of both college impact models, Astin's Inputs-Environment-Outcomes Model (1991) and Tinto and Pusser's Model of Institutional Action for Student Success (2006), results of this study indicated that First Generation Access Programs increase the intellectual and personal/social attainment of first-generation, first-year students. Therefore, the environment cultivated by First-Generation Access Programs for first-generation students is effective in assisting to overcome the challenges faced by this at-risk population in their transition to college.

Results of this study were based on the responses of 184 participants. Of the 184 participants, 64% were female, 46.2% were Black, more students reported gaining intellectually and personally/socially, and 35.3% earned a cumulative grade point average

in the range of 3.0 to 3.49. Results indicated that all participants' self-reported significant intellectual and personal/social gains had a significant relationship. However, the participants' academic success, as measured by grade point average, was not influenced by their self-reported intellectual and personal/social gains. With this mind, self-reported intellectual and personal/social gains could not be used as predictors for academic success. However, the findings may have been influenced by the timing of the study (i.e. when the participants' cumulative grade point average was calculated) and different timing may have produced different results. For example, the cumulative grade point average and CSEQ was taken at the end of summer semester instead of at the end of the fall semester. The participants' cumulative grade point average may have been different as well as the self-reported participants' responses to the survey. In addition, gender had a significant effect in this study. Females had noticeably higher mean scores in self-reported personal/social estimate of gains and academic success (grade point average).

The conclusion of this research study is that results from the self-reported data from the participants in this study, support the literature related to First Generation Access Programs by way of helping the at-risk population transition to college. However, the results indicate that the students' academic success, grade point average in this study, might not serve as the best measure of defining the academic success of this population. Recommendations for further research include identifying a more complete definition of academic success for this study, a longitudinal qualitative study to determine more specific factors of perceived intellectual and social attainment that affect academic success of the population used in this study and conducting similar studies that include and compare traditional, first-generation, first-year college students enrolled in First

Generation Access Programs and first-generation, first-year college students who are not enrolled in First Generation Access Programs.

References

Adelman, C. (2005). *Moving into town and moving on: The community college in the lives of traditional-age students.* Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Allen, T.D., McManus, S.E., & Russell, J.E.A. (1999/6). Newcomer socialization and stress: Former peer relationships as a source of support, *Journal of Vocational Behavior, 54*(3), 453-470.

Astin, A. W. (1970). The methodology of research on college impact, part one. *Sociology of Education, 43*(3), 223-254.

Astin, A.W. (1977). *Four critical years: Effects of college on beliefs, attitudes, and knowledge.* San Francisco: Jossey-Bass, Inc.

Astin, A. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education.* San Francisco: Jossey-Bass.

Astin, A. W. (1991). *Assessment for excellence.* San Francisco: Jossey-Bass, Inc.

Astin, W.W. (1993). *What matters in college? Four critical years revisited.* San Francisco: Jossey-Bass, Inc.

Balz, F., & Esten, M. (1998). Fulfilling private dreams, serving public priorities: An analysis of Trio students' success at independent colleges and universities. *Journal of Negro Education, 67*(4). 333-345.

Berkner, L., & Choy, S. (2008). Descriptive summary of 2003-04 beginning postsecondary students: Three years later. (NCES 2008-174). U.S. Department of Education, NCES. Washington, DC: U.S. Department of Education. Retrieved September 5, 2010, from http://nces.edu.gov/pubsearch/pubsinfo.asp?pubid=2008174.

Carey, K. (2004). A matter of degrees: *Improving graduation rates in four-year colleges and universities.* Washington, DC: The Education Trust.

Center for Postsecondary Research at Indiana University. (2007) The College Student Experiences Questionnaire Assessment Program. Retrieved January 24, 2010 from http://cseq.iub.edu/index.cfm.

Chaney, B., Muraskin, L. D., Cahalan, M. W. (1998). Helping the progress of disadvantaged students in higher education: The Federal Student Support Services Program. *Educational Evaluation and Policy Analysis,20*, 197-215.

Chen, X., & Carroll, C.D. (2005). *First-generation students in postsecondary education: A look at their college transcripts* (Postsecondary education descriptive analysis report, NCES 2005-171). Washington, DC: National Center for Education Statistics.

Choy. S. (2001). *Students whose parents did not go to college: Postsecondary access, persistence, and attainment.* Washington, DC: U.S. Department of Education.

Colyar, J. (2011). Strangers in a strange land: Low-income students and the transition to college. In A.J. Kezar (Ed.). *Recognizing and serving low-income students in higher education: An examination of institutional policies, practices, and culture* (pp. 121 – 138). New York: Routledge.

Council for Opportunity in Education. (2008). What is TRIO? Retrieved September 15, 2008, from http://www.coenet.us/ecm/AM/Template.cfm?Section=What_is_TRIO&Template=/CM/HTMLDisplay.cfm&ContentID=2862.

Creswell, J.W. (2005). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson.

DeAngelo, L. (2010, March 1). College choice for first-generation students [Web log post]. Retrieved from http://heri.ucla.edu/blog/?p=421

Engle, J., Bermeo, A., & O'Brien, C. (2006). Straight from the source: What works for first-generation college students: *Pell Institute for the Study of Opportunity in Higher Education.* Retrieved from ERIC.

Engstrom, C., & Tinto, V. (2008). Access without support is not opportunity. *Change, 40*(1), 46–50. Retrieved from Academic Search Premier database.

Fassett, D.L., & Warren, J.T. (2004). "You get pushed back": The strategic rhetoric of educational success and failure in higher education. *Communication Education, 53*(1), pp. 21-39.

Flowers, L. A. (2004). Examining the effects of student involvement on African American student development. *Journal of College Student Development, 45*(6), 633-654.

Frankel, J.R., & Wallen, N.E. (2006). *How to design and evaluate research in education* (6th ed.). New York: McGraw Hill.

Gall, M.D., Gall, J.P., & Borg, W.R. (2007*). Educational Research: An Introduction* (8th ed.). Boston: Pearson Education, Inc.

Gandara, P. (2001). *Paving the way to postsecondary education: K-12 interventions for underrepresented youth.* Washington D.C.: National Center for Education Statistics.

Garavalia, L., Ray, M., Murdock, T., & Gredler, M. (2004). *A comparative analysis of achievement calibration accuracy in developmental and nondevelopmental college students*. Research and Teaching in Developmental Education.

Gonyea, R.M., Kish, K.A., Kuh, G.D., Muthiah, R.N., & Thomas, A. D. (2003). *College Student Experiences Questionnaire: Norms for the Fourth Edition*. Bloomington, IN: Indiana University Center for Postsecondary Research, Policy, and Planning.

Green, D. (2006). Historically underserved students: What we know, what we still need to know. *New Directions Faro Community Colleges, 135*, 21–28.

Hacker D.J., Bol L., Horgan D., Rakow E.(2000). Test prediction and performance in a classroom context. *Journal of Educational Psychology*, 92, 160–170.

Hall, J.D. (2011). *Self-directed learning characteristics of first-generation, first-year college students participating in a summer bridge program* (Doctoral dissertation). Retrieved from Dissertations and Theses database (UMI No. AAT 3445126)

Heller, D, (2001). The states and public higher education policy: Accessibility, affordability, and accountability. Baltimore: The Johns Hopkins Press.

Higher Education Act of 1965, Sec.402B [6] g1 [a]).

Higher Education Act of November 8, 1965. (2008). Retrieved February 16, 2008, from http://www.higher-ed.org/resources/HEA1.htm.

Hochlander, G., Sikora, A. C., Horn, L., & Carroll, C. D. (2003). *Community college students: Goals, academic preparation, and outcomes* (No. NCES 2003-164). Washington, DC: National Center for Education Statistics.

Hooks, B. (2000). *Where we stand: Class matters*. New York: Routledge.

Horwedel, D.M. (2008). Putting first-generation students first. *Diverse Issues in Higher Education, 25*(5), 10-12.

Hu, S. & Kuh, G.D. (2002). Being (Dis)engaged in educationally purposeful activities: the influences of student and institutional characteristics. *Research in Higher Education*, Vol. 43, No. 5. (October 2002), pp 555 – 575.

Hu, S. & Kuh, G.D. (2003). Diversity Experiences and College Student Learning and Personal Development. *Journal of College Student Development*, Vol. 44, No. 3 (May/June 2003), pp. 320-334.

Hutley, K. (2008). *Alexander Astin's theory of involvement: A summary*. Retrieved August 18, 2010, from http://www.sotl.ilstu.edu/conf/astin.shtml.

Ishitani, T. T. (2003). A longitudinal approach to assessing attrition behavior among First-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education*, 44, 433-449.

Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education*, *77*(5), 860-886.

Ishitani, T., Davis, H., Lyzogub, I., & Snider, K. (2001) Does campus involvement affect academic performance?: Comparison between resident and commuter students. Indiana State University: Office of Institutional Research & Effectiveness.

Jacobi, M. (1991). Mentoring and undergraduate academic success: A literature review. *Review of Educational Research, 61*(4), 505–532.

Jehangir, R. (2010). Stories as knowledge: Bringing the lived experience of first-generation college students into the academy. *Urban Education*, 45, 533-553.

Kezar, A. (2001). *Summer Bridge Programs: Supporting All Students.* DC: George Washington University.

Kuh, G.D. (1995). The Other Curriculum: Out of class experiences associated with student learning. *Journal of Higher Education*, Vol. 66, No.2, pp. 123-155.

Kuh, G.D., Gonyea, R.M. & Williams, J.M. (2005). What students expect from college and what they get. In T. E. Miller, B. E. Bender, and J. H. Schuh, et al., (Eds), *Promoting reasonable expectations: Aligning student and institutional views of the college experience* (pp.34-65). San Francisco: Jossey-Bass.

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2007). *Piecing together the student success puzzle*. Hoboken, NJ: ASHE.

Kuh, G.D., Kinzie, J., Schuh, J.H., Whitt, E. J., & Associates (2005). *Student success in college: Creating conditions that matter*. Washington, DC: American Association for Higher Education.

Kuh, G.D. & Vesper, N. (1997). A Comparison of Student Experiences with Good Practices in Undergraduate Education Between 1990 and 1994. *The Review of Higher Education*, Vol. 21, No. 1, pp 43-61.

Leonhardt, D. (2005). The college dropout boom. In correspondents of the *New York Times. Class matters,* (pp. 87-104). New York: Henry Holt.

Levine, A., & Nidiffer, J., (1996). *Beating the odds: How the poor get to college*. San Francisco: Jossey-Bass Publishers.

Light, R.J. (1992). *The Harvard assessment seminars: Exploration with students and faculty about teaching, learning, and student life* (second report). Cambridge, Mass.: Harvard University Graduate School of Education and Kennedy School of Government.

Lohfink, M. M., Paulsen, M. B. (2005). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development, 46*, 409-428.

London, H. B. (1996 November/December). *How college affects first-generation college students.* About Campus 23: 9–13.

London, H.B. (2000). Transformations: Cultural challenges faced by first-generation students. In. L.S. Zwerling & H.B. London (Eds.), *First-generation students: Confronting the cultural issues* (pp. 5-11), New Directions for Community Colleges, No. 80. San Francisco: Jossey-Bass.

Longwell-Grice, R., & Longwell-Grice, H. (2008). Testing tinto: How do retention theories work for first-generation, working-class students? *Journal of College Student Retention: Research, Theory & Practice, 9*(4), 407-420.

Maldonado, D., Rhoads, R., and Buenavista, T. (2005). The student-initiated retention project: Theoretical contributions and the role of self-empowerment. *American Educational Research Journal,* 42(4), 605-638.

Marx, G. (2006). *Sixteen trends, their profound impact on our future: Implications for students, education, communities, countries, and the whole society.* Alexandria, VA: Educational Research Service.

McCarron, G. P. & Inkelas, K. K. (2006). The gap between educational aspirations and attainment for first-generation college students and the role of parental involvement. *Journal of College Student Development, 47*(5), 534-49.

Mertler, C.A., & Vannatta, R.A. (2005). *Advanced and multivariate statistical methods: Practical application and interpretation*. Glendale, CA: Pyrczak Publishing.

McMillan, J.H., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7th ed.). Boston: Pearson/Allyn and Bacon.

Millard, R.M. (1991). Governance, Quality and Equity in the United States. In R.O. Berdahl, G.C. Moodie & I.J. Spitzberg, Jr. (Eds), *Quality and access in higher education: Comparing Britain and the United States* (pp. 58-74). Buckingham, England: The Society for Research into Higher Education.

Myers, D. & Schirm, A. (1999). *The impacts of upward bound: Final report for phase I of the national evaluation* (Mathematica Policy Research, Inc. Contract No. LC-92001001, MPR Ref. No. 8046-515). Washington D.C.: U.S. Department of Education.

National Center for Educational Statistics (1994). *A Preliminary Study of the Feasibility and Utility for National Policy of Instructional "Good Practice" Indicators in Undergraduate Education*. Washington, DC. Office of Educational Research and Improvement, U.S. Department of Education.

National Center for Education Statistics. (2009). Table 238: Enrollment and degrees conferred in degree-granting institutions that serve large proportions of Hispanic undergraduate students, by selected characteristics and institution: Fall 2007 and 2007-08. Retrieved from http://nces.ed.gov/programs/digest/d09/tables/dt09_238.asp.

Nora, A., Barlow, E., & Crisp, G. (2005). Student persistence and degree attainment beyond the first year of college: The need for research. In A. Seidman (ED.), *College student retention: Formula for student success* (pp. 129-154). Westport, CT: ACE/Prager.

Nunez, A., & Cuccaro-Alamin, S. (1998). *First-generation students: Undergraduates whose parents never enrolled in postsecondary education* (NCES Rep. N. 98-082). Washington, DC: National Center for Educational Statistics.

Orbe, M.P. (2004). Negotiating multiple identities within multiple frames: An analysis of first-generation college students. *Communication Education, 53*(2), 131-149.

Ory, J.C. & Braskamp, L.A. (1988). Involvement and growth of students in three academic programs. *Research in Higher Education, 28*, 116-29.

Oseguera, L. O., Locks, A. M., & Vega, I. I. (2009). Increasing Latina/o students' baccalaureate attainment: A focus on retention. *Journal of Hispanics in Higher Education, 8(*1), 23-53.

Pace, C.R. (1985). *The credibility of self-reports*. Los Angeles: University of California, Center for the Study of Evaluation, Graduate School of Education.

Pace, C.R. (1990). *The undergraduates: A report of their activities and progress in college in the 1980s.* Los Angeles: Center for the Study of Evaluation, UCLA Graduate School of Education.

Pace, C.R., & Kuh, G.D. (1998). *College Student Experiences Questionnaire* (4th ed.). Bloomington: IN: Indiana University, Center for Postsecondary Research.

Pajares, F., & Schunk, H. D. (2001). Self-beliefs and school success: Self-efficacy, self-concept, and school achievement. In R. Riding & S. Rayner (Eds.), *Perception* (pp. 239-266). London: Ablex.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., and Terenzini, P. T. (2004). First-generation college students: additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*(3), 249-284.

Pascarella, E.T., & Terenzini, P.T. (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of Education Psychology,* 75, 215-226.

Phillips, S. (2008, September 1). Summer Bridge Program eases students into college. *Temple News.* Retrieved from http://temple-news.com/2008/09/01/summer-bridge-program-eases-students-into-college/

Poisson, S.E., & Russel, J.H. (1990). Assessment of involvement in a peer orientation program. *Canadian Journal of Counseling, 24*(3), 186-198.

Putnam, R. (2000). *Bowling alone: The collapse and revival of American community.* New York, NY: Simon & Schuster.

Reid, M.J., & Moore, III., J.L. (2008). College readiness and academic preparation for postsecondary education: Oral histories of first-generation urban college students. *Urban Education,* 43, 240-261.

Robert, E. L., & Thompson, G. (1994). Learning assistance and the success of underrepresented students at Berkeley. *Journal of developmental education, 3,* 4-14.

Saenz, V. B., Hurtado, S., Barrera, D., Wolf, D., & Yeung, F. (2007). *First in my family: A profile of first-generation college students at four-year institutions since 1971*. Los Angeles, CA: Higher Education Research Institute, UCLA.

Santa Rita, E., & Bacote, J. B. (1996). *The benefits of college discovery pre- freshman summer programs for minority and low income students.* Springfield, VA: Dynders, Inc. (ERIC Document Reproduction Service No. ED394536).

Sengupta, R., & Jepsen, C. (2006). *California's community college students*. San Francisco, CA: Public Policy Institute of California.

Somers, P., Woodhouse, S., & Cofer, J. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *National Association Student Personnel Administrators Journal, 41*(3), 418 -435.

Spady, W. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange, 1*(1), 64-85.

Spady, W. (1971). Dropouts from higher education: Toward an empirical model. *Interchange, 2*(3), 38-62.

St. John, E. P., Andrieu, S., Oescher, J., & Starkey, J. B. (1994). The influence of student aid on within-year persistence by traditional-age students in 4-year colleges. *Research in Higher Education, 35* (4), 455–480.

Striplin, J. (1999, June). *Facilitating transfer for first-generation community college students.* Washington, D.C.: Office of Educational Research and Improvement. (ERIC Digest No. EDD00036)

Student Support Services Program, 34 C.F.R. § 646.1.

Swail, W.S., Cabrera, A.F., & Lee, C. (2005). *From middle school to the workforce: Latino students and the educational pipeline.* Washington, DC: The Educational Policy Institute.

Taylor, M.O. (2011). *How precollege programs enhance the chances of student success toward college completion* (Doctoral dissertation). Retrieved from Dissertations and Theses database (UMI No. AAT 3460074)

Terenzini, P.T., Springer, L., Yaeger, P.M., Pascarella, E.T., and Nora, A. (1996). First – generation students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37*(1), 1–22.

Thayer, P. (2000, May). Retention of students from first generation and low income backgrounds. *Opportunity Outlook*, 2-8.

Thelin, John R. A History of American Higher Education. Baltimore: Johns Hopkins University Press, 2004.

The Pell Institute for the Study of Opportunity in Higher Education. (2008). Moving beyond access: College success for low-income, first-generation students. Washington, DC:Author.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.

Tinto, V. (1993). *Leaving college. Rethinking the causes and curves of student attrition.*(Second Edition). Chicago: The University of Chicago Press.

Tinto, V. (2003). Establishing conditions for student success. In L. Thomas, M. Cooper, & J. Quinn (Eds.), *Improving completion rates among disadvantaged students* (pp. 1-9). Sterling, VA: Trentham.

Tinto, V. & Pusser, B. (2006). Moving from theory to action: Building a model of institutional action for student success. Washington D.C.: National Postsecondary Education Cooperative.

Trow, M.J. (2001). From mass higher education to universal access: The American advantage. In P.G. Altbach, P.J. Gumport, & J.B. Johnstone (Eds.), *In defense of American higher education* (pp. 110-143). Baltimore, MD: The Johns Hopkins University Press.

U.S. Department of Education, (2003-2004). Washington, DC: *National Postsecondary Student Aid Study* (NPSAS).

U.S. Department of Education/Institute of Education Sciences. (2006). Talent search. Retrieved March 26, 2007, from http://www.whatworks.edu.gov/PDF/intervention/WWC_Talent_Search_122806.html

U.S. Department of Education. (1997). National Postsecondary Student Aid Study, 1995-96 (NPSAS:96) Methodology Report (NCES Technical Report, no. NCES 98-073). Washingon, DC: Author.

U.S. Department of Education (2008a). *TRIO Promising and Innovative Practice Studies: Final Report on Promising and Innovative Practices Among SSS Program Grantees*. Washington DC.

U.S. Department of Education (2008b). *A Profile of the Federal TRIO Programs and Child Care Access Means Parents in School Program. Washington DC.*

U.S. Department of Education (2009). *History of federal TRIO programs*. Retrieved October 3, 2009, from http://www2.ed.gov/about/offices/list/ope/trio/triohistory.html

Van Galen, J.A. (2000). Education & class. *Multicultural Education*. 7(3), 2-11.

Vaughan, G.B. (1992). The community college mission and the diverted dream. *Review of Higher Education, 16*, 107-123.

Venezia, A., Kirst, M. W., & Antonio, A. L. (2003). *Betraying the college dream: how disconnected K-12 and postsecondary education systems undermine student aspirations*. Retrieved September 13, 2010, from Stanford University, Institute for Higher Education Research Bridge Project Web site: http://www.stanford.edu/group/bridgeproject/betryingthecollegedream.pdf

Walpole, M., Shimmerman, H., Mack, C., Mills, J.T., Scales, M., & Albano, D. (2008). Bridge to success: Insight into summer bridge program students' college transition. *Journal of the First-year Experience & Students in Transition, 20*(1), 11-30.

Walpole, M. (2011). Academics, campus administration, and social interaction: Examining campus structure using post-structural theory. In A.J. Kezar (Ed.), *Recognizing and serving low-income students in higher education: An examination of institutional policies, practices, and culture* (pp. 99-120). New York: Routledge.

Warburton, E. C, Bugarin, R., & Nunez, A. M. (2001). *Bridging the gap: Academic preparation and postsecondary success of first-generation students. Statistical analysis report. Postsecondary education descriptive analysis reports*. (NCES 2001-153). Washington DC: National Center for Education Statistics.

Whitley, J.M. , Bertin, B.D., Ferrant, E.A., &Yokota, N. (1985). *Influences on the character development during the college years: The retrospective view of recent undergraduates*. In Promoting Values Development in College Students, edited by J. Dalton, pp. 29-36. Washington, D.C.: National Association of Student Development Personnel Administrators.

Wolf-Wendel, L., Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development, 50*(4), 407-428.

York, M. & Tross, S. (1994). *Evaluation of student retention programs: An essential component*. Paper presented at Annual SUCCEED conference on the improvement of Engineering Education in Raleigh, NC.

Zhang, Y. & Chan, T. (2007). *An Interim Report on the Student Support Services Program: 2002-03 and 2003-04, With Select Data from 1998-2002*. Washington, DC: U.S. Department of Education, Office of Postsecondary Education. Federal TRIO Programs.

Zhang, Y., Chan, T., Hale, M., & Kirshstein, R. (2005). *A Profile of the Student Support Services Program: 1998-1999 through 2001-2002*. Washington, DC: U.S. Department of Education. Federal TRIO Programs.

Zuniga, R. (2008). *Developmental Education Summer Bridge Program 2007. Texas Higher Education Coordinating Board cross-site evaluation final report.* Retrieved from http://www.thecb.state.tx.us/collegereadiness/DevEdSummer.pdf

APPENDICIES

Appendix A: College Student Experiences Questionnaire

College Student Experiences Questionnaire

This questionnaire asks about how you spend your time at college--with faculty and friends and in classes, social and cultural activities, extracurricular activities, employment, and use of campus facilities such as the library and student center. The usefulness of this or any other survey depends on the thoughtful responses of those who are asked to complete it. Your participation is very important and greatly appreciated.

The information obtained from you and other students at many different colleges and universities will help administrators, faculty members, student leaders, and others to improve the conditions that contribute to your learning and development and to the quality of the experience of those who will come after you.

At first glance, you may think it will take a long time to complete this questionnaire, but it can be answered in about 30 minutes or less. And you will learn some valuable things about yourself, as your answers provide a kind of self-portrait of what you have been doing and how you are benefitting from your college experience.

You do not have to write your name on the questionnaire. But as you will see on the next page we would like to know some things about you so that we can learn how college experiences vary, depending on students' age, sex, year in college, major field, where they live, whether they have a job, and so forth. To know where the reports come from, a number on the back page identifies your institution.

Your questionnaire will be read by an electronic scanning device, so be careful in marking your responses. **Please use only a #2 black lead pencil.** Do not write or make any marks on the questionnaire outside the spaces provided for your answers. Erase cleanly any responses you want to change. **It is very important to answer all questions;** if you are uncertain about what a question means, use your best judgment.

Thank you for your cooperation and participation!

This questionnaire is available from the Indiana University Center for Postsecondary Research and Planning, School of Education, 201 North Rose Avenue, Bloomington, IN 47405-1006. It is for use by individuals and institutions interested in documenting, understanding, and improving the student experience.

Fourth Edition 1998 Authors: C. Robert Pace and George D. Kuh

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BACKGROUND INFORMATION

DIRECTIONS: Indicate your response by filling in the appropriate oval next to the correct answer.

Age

- ○ 19 or younger
- ○ 20 - 23
- ○ 24 - 29
- ○ 30 - 39
- ○ 40 - 55
- ○ Over 55

Sex

- ○ male
- ○ female

What is your marital status?

- ○ not married
- ○ married
- ○ divorced
- ○ separated
- ○ widowed

What is your classification in college?

- ○ freshman/first-year
- ○ sophomore
- ○ junior
- ○ senior
- ○ graduate student
- ○ unclassified

Did you begin college here or did you transfer here from another institution?

- ○ started here
- ○ transferred from another institution

Where do you now live during the school year?

- ○ dormitory or other campus housing
- ○ residence (house, apartment, etc.) within walking distance of the institution
- ○ residence (house, apartment, etc.) within driving distance
- ○ fraternity or sorority house

With whom do you live during the school year? (Fill in all that apply)

- ○ no one, I live alone
- ○ one or more other students
- ○ my spouse or partner
- ○ my child or children
- ○ my parents
- ○ other relatives
- ○ friends who are not students at the institution I'm attending
- ○ other people: who?

Do you have access to a computer where you live or work, or nearby that you can use for your school work?

- ○ yes
- ○ no

What have most of your grades been up to now at this institution?

- ○ A
- ○ A-, B+
- ○ B
- ○ B-, C+
- ○ C, C-, or lower

Which of these fields best describes your major, or your anticipated major? You may indicate more than one if applicable.

- ○ Agriculture
- ○ Biological/life sciences (biology, biochemistry, botany, zoology, etc.)
- ○ Business (accounting, business administration, marketing, management, etc.)
- ○ Communication (speech, journalism, television/radio, etc.)
- ○ Computer and information sciences
- ○ Education
- ○ Engineering
- ○ Ethnic, cultural studies, and area studies
- ○ Foreign languages and literature (French, Spanish, etc.)
- ○ Health-related fields (nursing, physical therapy, health technology, etc.)
- ○ History
- ○ Humanities (English, literature, philosophy, religion, etc.)
- ○ Liberal/general studies
- ○ Mathematics
- ○ Multi/interdisciplinary studies (international relations, ecology, environmental studies, etc.)
- ○ Parks, recreation, leisure studies, sports management
- ○ Physical sciences (physics, chemistry, astronomy, earth science, etc.)
- ○ Pre-professional (pre-dental, pre-medical, pre-veterinary)
- ○ Public administration (city management, law enforcement, etc.)
- ○ Social sciences (anthropology, economics, political science, psychology, sociology, etc.)
- ○ Visual and performing arts (art, music, theater, etc.)
- ○ Undecided
- ○ Other: What?

Did either of your parents graduate from college?

- ○ no
- ○ yes, both parents
- ○ yes, father only
- ○ yes, mother only
- ○ don't know

Do you expect to enroll for an advanced degree when, or if, you complete your undergraduate degree?

- ○ yes
- ○ no

How many credit hours are you taking this term?

- ○ 6 or fewer
- ○ 7 - 11
- ○ 12 - 14
- ○ 15 - 16
- ○ 17 or more

During the time school is in session, about how many hours a week do you usually spend outside of class on activities related to your academic program, such as studying, writing, reading, lab work, rehearsing, etc.?

- ○ 5 or fewer hours a week
- ○ 6 - 10 hours a week
- ○ 11 - 15 hours a week
- ○ 16 - 20 hours a week
- ○ 21 - 25 hours a week
- ○ 26 - 30 hours a week
- ○ more than 30 hours a week

During the time school is in session, about how many hours a week do you usually spend working on a job for pay? To provide information about your work experiences on and off campus, fill in one oval in each column.

	ON-CAMPUS	OFF-CAMPUS
None; I don't have a job	○	○
1 - 10 hours a week	○	○
11 - 20 hours	○	○
21 - 30 hours	○	○
31 - 40 hours	○	○
More than 40 hours	○	○

If you have a job, how does it affect your school work?

- ○ I don't have a job
- ○ My job does not interfere with my school work
- ○ My job takes some time from my school work
- ○ My job takes a lot of time from my school work

How do you meet your college expenses? Fill in the response that best approximates the amount of support from each of the various sources.

	None	Very Little	Less Than Half	About Half	More Than Half	All or Nearly All
Self (job, savings, etc.)	○	○	○	○	○	○
Parents	○	○	○	○	○	○
Spouse or partner	○	○	○	○	○	○
Employer support	○	○	○	○	○	○
Scholarships and grants	○	○	○	○	○	○
Loans	○	○	○	○	○	○
Other sources	○	○	○	○	○	○

What is your racial or ethnic identification? (Fill in all that apply)

- ○ American Indian or other Native American
- ○ Asian or Pacific Islander
- ○ Black or African American
- ○ Caucasian (other than Hispanic)
- ○ Mexican-American
- ○ Puerto Rican
- ○ Other Hispanic
- ○ Other: What?

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this institution during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the ovals to the right of each statement.

Library	Never	Occasionally	Often	Very Often
Used the library as a quiet place to read or study materials you brought with you.	○	○	○	○
Found something interesting while browsing in the library.	○	○	○	○
Asked a librarian or staff member for help in finding information on some topic.	○	○	○	○
Read assigned materials other than textbooks in the library (reserve readings, etc.).	○	○	○	○
Used an index or database (computer, card catalog, etc.) to find material on some topic.	○	○	○	○
Developed a bibliography or reference list for a term paper or other report.	○	○	○	○
Gone back to read a basic reference or document that other authors referred to.	○	○	○	○
Made a judgment about the quality of information obtained from the library, World Wide Web, or other sources.	○	○	○	○

Computer and Information Technology	Never	Occasionally	Often	Very Often
Used a computer or word processor to prepare reports or papers.	○	○	○	○
Used e-mail to communicate with an instructor or other students.	○	○	○	○
Used a computer tutorial to learn material for a course or developmental/remedial program.	○	○	○	○
Participated in class discussions using an electronic medium (e-mail, list-serve, chat group, etc.).	○	○	○	○
Searched the World Wide Web or Internet for information related to a course.	○	○	○	○
Used a computer to retrieve materials from a library not at this institution.	○	○	○	○
Used a computer to produce visual displays of information (charts, graphs, spreadsheets, etc.).	○	○	○	○
Used a computer to analyze data (statistics, forecasting, etc.).	○	○	○	○
Developed a Web page or multimedia presentation.	○	○	○	○

DIRECTIONS: In your experience at this institution during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the ovals to the right of each statement.

Course Learning	Never	Occasionally	Often	Very Often
Completed the assigned readings for class.	○	○	○	○
Took detailed notes during class.	○	○	○	○
Contributed to class discussions.	○	○	○	○
Developed a role play, case study, or simulation for a class.	○	○	○	○
Tried to see how different facts and ideas fit together.	○	○	○	○
Summarized major points and information from your class notes or readings.	○	○	○	○
Worked on a class assignment, project, or presentation with other students.	○	○	○	○
Applied material learned in a class to other areas (your job or internship, other courses, relationships with friends, family, co-workers, etc.).	○	○	○	○
Used information or experience from other areas of your life (job, internship, interactions with others) in class discussions or assignments.	○	○	○	○
Tried to explain material from a course to someone else (another student, friend, co-worker, family member.)	○	○	○	○
Worked on a paper or project where you had to integrate ideas from various sources.	○	○	○	○
Writing Experiences				
Used a dictionary or thesaurus to look up the proper meaning of words.	○	○	○	○
Thought about grammar, sentence structure, word choice, and sequence of ideas or points as you were writing.	○	○	○	○
Asked other people to read something you wrote to see if it was clear to them.	○	○	○	○
Referred to a book or manual about writing style, grammar, etc.	○	○	○	○
Revised a paper or composition two or more times before you were satisfied with it.	○	○	○	○
Asked an instructor or staff member for advice and help to improve your writing.	○	○	○	○
Prepared a major written report for a class (20 pages or more).	○	○	○	○

Experiences with Faculty	Never	Occasionally	Often	Very Often
Talked with your instructor about information related to a course you were taking (grades, make-up work, assignments, etc.).	○	○	○	○
Discussed your academic program or course selection with a faculty member.	○	○	○	○
Discussed ideas for a term paper or other class project with a faculty member.	○	○	○	○
Discussed your career plans and ambitions with a faculty member.	○	○	○	○
Worked harder as a result of feedback from an instructor.	○	○	○	○
Socialized with a faculty member outside of class (had a snack or soft drink, etc.).	○	○	○	○
Participated with other students in a discussion with one or more faculty members outside of class.	○	○	○	○
Asked your instructor for comments and criticisms about your academic performance.	○	○	○	○
Worked harder than you thought you could to meet an instructor's expectations and standards.	○	○	○	○
Worked with a faculty member on a research project.	○	○	○	○
Art, Music, Theater				
Talked about art (painting, sculpture, artists, etc.) or the theater (plays, musicals, dance, etc.) with other students, friends, or family members.	○	○	○	○
Went to an art exhibit/gallery or a play, dance, or other theater performance, on or off the campus.	○	○	○	○
Participated in some art activity (painting, pottery, weaving, drawing, etc.) or theater event, or worked on some theatrical production (acted, danced, worked on scenery, etc.), on or off the campus.	○	○	○	○
Talked about music or musicians (classical, popular, etc.) with other students, friends, or family members.	○	○	○	○
Attended a concert or other music event, on or off the campus.	○	○	○	○
Participated in some music activity (orchestra, chorus, dance, etc.) on or off the campus.	○	○	○	○
Read or discussed the opinions of art, music, or drama critics.	○	○	○	○

DIRECTIONS: In your experience at this institution during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the ovals to the right of each statement.

	Never	Occasionally	Often	Very Often
Campus Facilities				
Used a campus lounge to relax or study by yourself.	○	○	○	○
Met other students at some campus location (campus center, etc.) for a discussion.	○	○	○	○
Attended a cultural or social event in the campus center or other campus location.	○	○	○	○
Went to a lecture or panel discussion.	○	○	○	○
Used a campus learning lab or center to improve study or academic skills (reading, writing, etc.)	○	○	○	○
Used campus recreational facilities (pool, fitness equipment, courts, etc.).	○	○	○	○
Played a team sport (intramural, club, intercollegiate).	○	○	○	○
Followed a regular schedule of exercise or practice for some recreational sporting activity.	○	○	○	○
Clubs and Organizations				
Attended a meeting of a campus club, organization, or student government group.	○	○	○	○
Worked on a campus committee, student organization, or project (publications, student government, special event, etc.).	○	○	○	○
Worked on an off-campus committee, organization, or project (civic group, church group, community event, etc.).	○	○	○	○
Met with a faculty member or staff advisor to discuss the activities of a group or organization.	○	○	○	○
Managed or provided leadership for a club or organization, on or off the campus.	○	○	○	○
Personal Experiences				
Told a friend or family member why you reacted to another person the way you did.	○	○	○	○
Discussed with another student, friend, or family member why some people get along smoothly, and others do not.	○	○	○	○
Asked a friend for help with a personal problem.	○	○	○	○
Read articles or books about personal growth, self-improvement, or social development.	○	○	○	○
Identified with a character in a book, movie, or television show and wondered what you might have done under similar circumstances.	○	○	○	○
Taken a test to measure your abilities, interests, or attitudes.	○	○	○	○
Asked a friend to tell you what he or she really thought about you.	○	○	○	○
Talked with a faculty member, counselor or other staff member about personal concerns.	○	○	○	○

	Never	Occasionally	Often	Very Often
Student Acquaintances				
Became acquainted with students whose interests were different from yours.	○	○	○	○
Became acquainted with students whose family background (economic, social) was different from yours.	○	○	○	○
Became acquainted with students whose age was different from yours.	○	○	○	○
Became acquainted with students whose race or ethnic background was different from yours.	○	○	○	○
Became acquainted with students from another country.	○	○	○	○
Had serious discussions with students whose philosophy of life or personal values were very different from yours.	○	○	○	○
Had serious discussions with students whose political opinions were very different from yours.	○	○	○	○
Had serious discussions with students whose religious beliefs were very different from yours.	○	○	○	○
Had serious discussions with students whose race or ethnic background was different from yours.	○	○	○	○
Had serious discussions with students from a country different from yours.	○	○	○	○
Scientific and Quantitative Experiences				
Memorized formulas, definitions, technical terms and concepts.	○	○	○	○
Used mathematical terms to express a set of relationships.	○	○	○	○
Explained your understanding of some scientific or mathematical theory, principle or concept to someone else (classmate, co-worker, etc.)	○	○	○	○
Read articles about scientific or mathematical theories or concepts in addition to those assigned for a class.	○	○	○	○
Completed an experiment or project using scientific methods.	○	○	○	○
Practiced to improve your skill in using a piece of laboratory equipment.	○	○	○	○
Showed someone else how to use a piece of scientific equipment.	○	○	○	○
Explained an experimental procedure to someone else.	○	○	○	○
Compared the scientific method with other methods for gaining knowledge and understanding.	○	○	○	○
Explained to another person the scientific basis for concerns about scientific or environmental issues (pollution, recycling, alternative sources of energy, acid rain) or similar aspects of the world around you.	○	○	○	○

CONVERSATIONS

DIRECTIONS: In conversations with others (students, family members, co-workers, etc.) outside the classroom *during this school year*, about how often have you talked about each of the following?

Topics of Conversation	Never	Occasionally	Often	Very Often
Current events in the news.	○	○	○	○
Social issues such as peace, justice, human rights, equality, race relations.	○	○	○	○
Different lifestyles, customs, and religions.	○	○	○	○
The ideas and views of other people such as writers, philosophers, historians.	○	○	○	○
The arts (painting, poetry, dance, theatrical productions, symphony, movies, etc.).	○	○	○	○
Science (theories, experiments, methods, etc.).	○	○	○	○
Computers and other technologies.	○	○	○	○
Social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, military use.	○	○	○	○
The economy (employment, wealth, poverty, debt, trade, etc.).	○	○	○	○
International relations (human rights, free trade, military activities, political differences, etc.).	○	○	○	○

Information in Conversations	Never	Occasionally	Often	Very Often
Referred to knowledge you acquired in your reading or classes.	○	○	○	○
Explored different ways of thinking about the topic.	○	○	○	○
Referred to something one of your instructors said about the topic.	○	○	○	○
Subsequently read something that was related to the topic.	○	○	○	○
Changed your opinion as a result of the knowledge or arguments presented by others.	○	○	○	○
Persuaded others to change their minds as a result of the knowledge or arguments you cited.	○	○	○	○

READING/WRITING

During this current school year, about how many books have you read? Fill in one response for each item listed below.	More than 20	Between 10 and 20	Between 5 and 10	Fewer than 5	None
Textbooks or assigned books	○	○	○	○	○
Assigned packs of course readings	○	○	○	○	○
Non-assigned books	○	○	○	○	○

During this current school year, about how many exams, papers, or reports have you written? Fill in one response for each item listed below.	More than 20	Between 10 and 20	Between 5 and 10	Fewer than 5	None
Essay exams for your courses	○	○	○	○	○
Term papers or other written reports	○	○	○	○	○

OPINIONS ABOUT YOUR COLLEGE OR UNIVERSITY

How well do you like college?

- ○ I am enthusiastic about it.
- ○ I like it.
- ○ I am more or less neutral about it.
- ○ I don't like it.

If you could start over again, would you go to the same institution you are now attending?

- ○ Yes, definitely
- ○ Probably yes
- ○ Probably no
- ○ No, definitely

THE COLLEGE ENVIRONMENT

Colleges and universities differ from one another in the extent to which they emphasize or focus on various aspects of students' development. Thinking of your experience at this institution, to what extent do you feel that each of the following is emphasized? The responses are numbered from 7 to 1, with the highest and lowest points illustrated. Fill in the oval with the number that best represents your impression on each of the following seven-point rating scales.

Emphasis on developing academic, scholarly, and intellectual qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing aesthetic, expressive, and creative qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing critical, evaluative, and analytical qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing an understanding and appreciation of human diversity

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing information literacy skills (using computers, other information resources)

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing vocational and occupational competence

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on the personal relevance and practical value of your courses

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

The next three ratings refer to relations with people at this college. Again, thinking of your own experience, please rate the quality of these relationships on each of the following seven-point rating scales.

Relationships with other students

Friendly, Supportive, Sense of belonging ⑦ ⑥ ⑤ ④ ③ ② ① Competitive, Uninvolved, Sense of alienation

Relationships with administrative personnel and offices

Helpful, Considerate, Flexible ⑦ ⑥ ⑤ ④ ③ ② ① Rigid, Impersonal, Bound by regulations

Relationships with faculty members

Approachable, Helpful, Understanding, Encouraging ⑦ ⑥ ⑤ ④ ③ ② ① Remote, Discouraging, Unsympathetic

Go to next page

ESTIMATE OF GAINS

DIRECTIONS: In thinking about your college or university experience up to now, to what extent do you feel you have gained or made progress in the following areas? Indicate your response by filling in one of the ovals to the right of each statement.

	Very Little	Some	Quite a Bit	Very Much
Acquiring knowledge and skills applicable to a specific job or type of work (vocational preparation).	○	○	○	○
Acquiring background and specialization for further education in a professional, scientific, or scholarly field.	○	○	○	○
Gaining a broad general education about different fields of knowledge.	○	○	○	○
Gaining a range of information that may be relevant to a career.	○	○	○	○
Developing an understanding and enjoyment of art, music, and drama.	○	○	○	○
Broadening your acquaintance with and enjoyment of literature.	○	○	○	○
Seeing the importance of history for understanding the present as well as the past.	○	○	○	○
Gaining knowledge about other parts of the world and other people (Asia, Africa, South America, etc.).	○	○	○	○
Writing clearly and effectively.	○	○	○	○
Presenting ideas and information effectively when speaking to others.	○	○	○	○
Using computers and other information technologies.	○	○	○	○
Becoming aware of different philosophies, cultures, and ways of life.	○	○	○	○
Developing your own values and ethical standards.	○	○	○	○

	Very Little	Some	Quite a Bit	Very Much
Understanding yourself, your abilities, interests, and personality.	○	○	○	○
Developing the ability to get along with different kinds of people.	○	○	○	○
Developing the ability to function as a member of a team.	○	○	○	○
Developing good health habits and physical fitness.	○	○	○	○
Understanding the nature of science and experimentation.	○	○	○	○
Understanding new developments in science and technology.	○	○	○	○
Becoming aware of the consequences (benefits, hazards, dangers) of new applications of science and technology.	○	○	○	○
Thinking analytically and logically.	○	○	○	○
Analyzing quantitative problems (understanding probabilities, proportions, etc.).	○	○	○	○
Putting ideas together, seeing relationships, similarities, and differences between ideas.	○	○	○	○
Learning on your own, pursuing ideas, and finding information you need.	○	○	○	○
Learning to adapt to change (new technologies, different jobs or personal circumstances, etc.)	○	○	○	○

ADDITIONAL QUESTIONS

1.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
7.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		

OTHER ID#, If Requested

THANK YOU FOR YOUR PARTICIPATION!

PLEASE DO NOT WRITE IN THIS AREA