

## ABSTRACT

### Causes and Differences in Retention of White, African American, and Hispanic Students Who Progressed Toward Graduation After First Year in College

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African American and Hispanic students' retention rates in college have revealed that minority students are much more likely than white students to drop out of college. Additionally, minority students' graduation rates remain at a lower percentage rate than white students. The reason African American and Hispanic students are not equally represented on college campuses and experiencing similar retention rates as white students concerns many colleges and universities.

Given these problems, this study focused on finding reasons why some African American and Hispanic students remain in college beyond their freshmen year. Examining the reasons why college students continue beyond their freshmen year will provide answers as to how universities can improve the retention rate of all ethnicities. The researcher used Dr. Pascarella and Dr. Terenzini's model as the primary theoretical framework lens for analyzing and interpreting data. Additionally, qualitative methods were used to measure such controlled variables as gender, ethnicity, and various colleges.

The findings revealed differences in social and academic integration scale factors by gender, ethnicity, and various institutions of higher education that influenced college

students to continue beyond their freshmen year. Furthermore, results revealed African American and Hispanic students require peer group interaction, institutional/goal commitment, and academic and intellectual development to increase their retention rate beyond their freshmen year of college. Universities stand to increase their knowledge base of how to increase the retention rate for minorities from this research. Institutions that focus attention on these findings can create a higher graduation rate. Improving minority student's retention until degree completion benefits all stakeholders.

Causes and Differences in Retention of White, African American, and Hispanic Students  
Who Progressed Toward Graduation After First Year in College

by

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## CHAPTER ONE

### Introduction

Over the years, the success of all students in higher education has been crucial for Americans to compete in the global economy (U.S. Department of Education, 2009). Professional positions have become more competitive, and college degrees even more essential for all to compete equally on the world scene. Today, the issue of college student persistence still remains a major focus of increased attention for many colleges and universities.

Over the last 30 years, colleges and universities in the United States (U.S.) have experienced an increase in their minority student population. In 2002, four year institutions revealed 24-26% of undergraduates were minority. However, in 2005, just 3 years later, minority students constituted about one-third (32%) of the total undergraduate enrollment (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2006). Over time, the change in increased minority students' representation on colleges and university campuses reflects the change in demographic composition of the U. S. population (U.S. Department of Education, 2006).

Statistical data on college student attendance shows African American attendance increased to 44.7% compared to white students' 52.9% in 4 years (U.S. Census Bureau, 2004). Yet, minority students were still less likely than white students to attain college degrees. Why are some students more likely to graduate and others more likely to drop out of college? Furthermore, why aren't more minority students receiving a degree

(Dervarics & Roach, 2000)? Examining factors that are related to white, African American, and Hispanic college students' persistence beyond their freshman year was the primary focus of this study.

This study was important because universities have reported extreme differences in the attrition rate of minority students compared to white students. Recently, Ronald Roach (2007) cited Shaun Harper's study that 67.6% of African American male students who started college never completed their degrees, and they have the worst college attrition rate among both sexes and all racial/ethnic groups. Given the significance in attrition rate among African American youth, it was important to investigate this phenomenon to better understand the problems and then to suggest solid solutions. These daunting statistics motivated an interest in studying this important topic.

Hausmann, Schofield, and Woods (2007) reported that other obligations such as work and family responsibilities were major factors related to African American students dropping out of college. However, high SAT scores, top 10% of class, and high school GPA were important factors related to students completing their college degrees. Research by Lang (2006) revealed unanswered questions such as; why are some students unable to finish their degrees at the university they attended first and are there significant differences between ethnic groups who continue beyond first year? These questions helped to guide the research.

In 2001, the U.S. Department of Education data revealed that the persistence of minority students at United States (U.S.) colleges during their first and second year was so poor that the government was studying ways to use federal money to pay successful programs that persisted (Borrego, 2002). Such federal programs provided access to

mentorship, academic tutorial assistance, and promoted the social importance of building student faculty relationships, which was evident in various persistence models. In addition, federal programs were effective in increasing students' persistence success; however, the cost was high. Researchers Braunstein, McGrath, and Pescatrice (2001) reported in their study, *Measuring the Impact of Financial Factors on College Persistence*, that financial aid did not have a significant impact on persistence beyond the freshman year. Instead, it was students from families with high incomes who tended to persist beyond the first year. Previous research revealed minority students reared in low-income families were significantly more likely to leave a four-year institution of higher education without a baccalaureate degree than students from higher income families (Dervarics & Roach, 2000). Furthermore, these students who performed well academically and were socially connected to the university validated their decision to persist on to their sophomore year.

Student persistence was also found to be a major factor related to funding based on the number of minority students attending the university. Many times, minority students' families were unable to provide financial assistance to attend college. Therefore, the need for additional assistance from the federal government was pivotal for all colleges and universities to increase minority students' representation. Most states used a funding formula to determine appropriations for universities, and most of the formulas were based on student headcounts in determining the budget for the institution (McKeown, 2000).

Nonetheless, a few states used revenue generated by lotteries to help fund higher education. The lottery revenue generated a regressive tax that contributed toward the



facilitation of equal access to higher education for low-income and minority citizens. Thus, increasing this type of funding for colleges and universities, has aided in the successful graduation of all students (Bowden, 2004). Consequently, academically successful college students were able to compete for higher paying professional careers. However, the lack of completion of a baccalaureate degree by minority students continues to contribute to the gap in educational attainment and ultimately the income level disparities between economically disadvantaged students and their more affluent classmates (Dervarics & Roach, 2000).

In spite of the encouraging overall increase in the number of African Americans and Hispanics enrolling in college, in terms of access and degree completion, the gap was larger when looking at the disparities in education attainment between various minority groups and white students (Renner, 2003). When focused on the number of minority students enrolled at predominantly white institutions, the college persistence gap between minority and white students was even greater. African American students seemed socially disconnected from these institutions. It appeared that these students lack interest in connecting with other social groups on campus. Recent evidence revealed that students who were disconnected from the university went home more often during college and were more likely to drop out (Massey, Fischer, Lundry, & Charles, 2003).

Recent research suggests that predominantly white college admission models favor individuals who met academic standards for college admission to white-dominated institutions which in some cases minorities did not meet (Sedlacek, 2004). The model included a high grade point average (GPA), high SAT and ACT scores, being ranked in the top (10%) of one's graduating class, while being culturally assimilated into

mainstream society and possessing the financial support or resources to pay for the rising cost of an education. All universities strive to admit students with high GPA's, good SAT/ACT scores, and the top 10% of graduating class. These universities must maintain documents and report this type of data. Because minorities did not meet the standard set forth by the university, many of these students who were African American males did not receive college admission.

Many factors have made the prediction of college success difficult for minority students. Among factors that predicted success were the type of colleges attended, such as historically black colleges and universities (HBCUs) versus predominantly white institutions (PWI), the amount of student involvement in campus activities, the services provided to students, and living situations while attending college (Stretch, 2005).

The persistence rate in higher education for minority students revealed inequities. For example, African American students at predominantly white institutions were viewed as academically, culturally, and economically incompatible with the education model used to determine college acceptance. African American students were considered academically, culturally, and economically incompatible mainly due to them not performing well while in college. Therefore, these students were less likely to persist beyond their freshmen year. In fact, an anti-going-to-college message articulated in rapper Kanye West's (2004) debut album, *The College Dropout*, blatantly suggested postsecondary education was overrated and degree attainment culturally worthless. On the contrary, students who persisted in college until degree completion consistently received higher job earnings than students who dropped out of college (U.S. Census Bureau, 2005).

Conversely, predominantly black institutions (PBI) showed a reduction in the high attrition rate, and graduated a larger numbers of black students by using a supportive approach (Hurd, 2000). Additionally, PBI believe that building social relationships with faculty and students while providing academic support to students increased their success rate. Hurd believes that using a similar approach would lead to a decline in the drop out rate among minority students at PWI's.

Predominantly white institutions (PWI) discovered that high levels of academic and social integration led to greater institutional commitment and persistence by the students that resulted in higher graduation rates (Braxton, 2000). This research showed that providing academic and social support increased the number of college graduates. Research by Braxton revealed that PWI's have increased their minority graduation rate by providing academic and social support. However, not as much when compared to the PBI's graduation rate of African American students.

Nationally, minority students' graduation rates remain at a lower percentage than rates of white students (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2006). Although the completion rate for minorities has recently improved, the gap in college graduation rates for non-white students still lags behind white students. In short, research on persistence factors for minorities is timely, and therefore, significant to all academic stakeholders who wish to establish an equal opportunity for all college students.

Proposed for this study, the researcher used the Drs. Pascarella and Terenzini's model as the primary analysis framework for analyzing and interpreting data. This model placed emphasis on the interaction between student and faculty as being important to

students' educational outcomes, as well as persistence in college. The belief was students who were integrated into the social and academic life of the institution were more likely to experience increased academic development during their years of college. Dr. Pascarella and Terenzini's model of cognitive outcomes were influenced either directly or indirectly by the variables of background characteristics and goal commitment. The influences from these variables determined whether freshman college students would persist or dropout.

### *Statement of the Problem*

Why minority students are not equally represented on college campuses and experiencing similar persistence rates as white students is a concern for colleges and universities. Examining white, African American, and Hispanic students' persistence in college has revealed that minority students are much more likely than white students to drop out of college. According to the U.S. Department of Education (2006), minority students' graduation rates remain at a lower percentage rate than white students.

Furthermore, despite some improvement, minority students still tend to not persist in college until degree completion in the same proportions as white students (Renner, 2003). Given these problems, this study focused on finding reasons why some African American and Hispanic students persist in college beyond their freshmen year. To improve the persistence of all students, it is important to determine why students persisted in college beyond their freshmen year. Improving minority student persistence until degree completion benefits all stakeholders; therefore, this research merits study.

### *Purpose of the Study*

The purpose of this study is: (1) to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities.

### *Research Questions*

To carry out the purpose of this study, the following research questions were asked:

1. Is there a difference in social integration scale factors by gender between students who persist beyond their freshmen year?
2. Is there a difference in academic integration scale factors by gender between students who persist beyond their freshmen year?
3. Is there a difference in social integration scale factors by ethnicity between students who persist beyond their freshmen year?
4. Is there a difference in academic integration scale factors by ethnicity between students who persist beyond their freshmen year?
5. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions?
6. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions?

7. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions?

8. Is there a difference in academic integration scale factors by between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions?

9. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions?

10. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions?

11. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions?

12. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions?

### *Significance of the Study*

The study was significant because it examined research for reasons why minority college enrollment was under-represented. First, the number of minority undergraduate students' in college has been smaller for decades when compared to white students. Furthermore, the study examined reasons for extreme differences between colleges, and

universities in regard to college enrollment for minority students. Second, African American students are more than twice as likely to drop out of college as white students. Therefore, this study was important because it explored why African American males have the worst attrition rate among both sexes and all racial/ethnic groups. Third, although enrollment numbers have increased, African American students' retention at institutions of higher education has continued to be an important issue for many years. African American students' retention rate warrants study because universities base funding on minority representation, and this study explained why these students either persisted beyond their freshman year or withdrew from the institution.

Hispanics are the fastest growing population in the United States and have become the largest minority population (U.S. Census Bureau, 2007). As college enrollment for Hispanic students has increased, the acknowledgement of the Hispanic students' dropout rate when compared to white students cannot be ignored. Therefore, this study is important because it provides answers as to why Hispanic students are not equally represented at the university level as white students. Because Hispanic students have a higher dropout rate when compared to white students, this study investigates the factors related to this disparity. The economic status of these students has been found to be a major difference thus the relationship was explored. This change in growth and economic disadvantage has important implications on society and the Hispanic communities. Nonetheless, this study examined factors that increase college persistence, and is therefore, significant to all stakeholders who wish to establish equal opportunities for two minority college students.

Public and private universities stand to increase their knowledge base of how to increase minority persistence from this research. African American and Hispanic students will learn how to improve their persistence in college beyond their freshmen year. Consequently, this study is significant because it reveals the inequities between universities and various ethnic groups. Finally, this study is important because each phenomenon warrants an investigation to create a paradigm shift.

### *Assumptions*

This study assumes that the participants will: 1) respond honestly to Pascarella's and Terenzini's (1980) social and academic integration questionnaire derived from Tinto's model; and 2) the Likert's Scale Instrument will accurately measure students' interest and responses to questions relating to factors motivating them to remain in college beyond their freshmen year at various types of institutions. Finally, it is assumed that institutions in Texas adequately represent the diversity of the study population to reveal the factors related to the persistence of white, African American, and Hispanic college students beyond their freshmen year.

### *Delimitations*

This study was delimited by certain boundaries. The research focused on selected sophomore, junior and senior college students. Participants in this study were students who attended selected public and private colleges.. The participants were white, African American, and Hispanic college students. No freshmen were used in this study. Only self-reported data were used.



### *Limitations*

The study was subject to all limitations recognized in conducting field research, namely the validity and reliability of the instrument and interview protocol. The sample population of sophomore, junior and senior college students at PWI's and PBI's was a limitation; therefore, the results cannot be generalized. The selection of white, African American, and Hispanic students may not reflect the views of the general student population at other U.S. institutions. Another limitation was that the participants were selected from public and private PWI's and PBI's. The study does not include students from predominantly Hispanic universities, and only self-reported data were used.

### *Definitions of Terms*

1. Academic Integration – Refers to students who persist in college academically.
2. *African American* – Refers to people of African descent, who were born, reared, and/or reside in the United States. African American and Blacks are often used interchangeably.
3. *Attrition rate* – The percentage of entering freshmen who have not graduated and who are no longer enrolled at the institution.
4. *Black* – Refers to people of African descent, who are born, raised, and/or reside in the United States. Blacks and African American are used interchangeably.
5. *Enrollment management* – Can be defined as an organizational concept as well as systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments.

6. *Graduation rate* – The percentage of the freshmen cohort completing the bachelor's degree either at the institution in which they entered as freshmen or at another institution.

7. *Hispanics* – Students who are of Mexican or Spanish descent.

8. *Historically Black Colleges and Universities* (HBCUs) – Will be used interchangeably with predominantly black institutions' (PBI) and referred to as four-year educational institutions in America founded for the specific purpose of educating black or African American students, and where at least 50% of the undergraduate population is composed of black or African American students.

9. *Non-persister* – Results of student's decision not to continue college enrollment beyond their freshmen year.

10. *Predominantly White institutions* (PWIs) – Refers to an educational institution where at least 50% of the undergraduate student population are white.

11. *Persistence* – Students who remain in college from one year to the next.

12. *Retention* – Students who remain in the same college beyond their first year.

13. *Retention rate* – The percentage of the freshmen cohort who complete the bachelor's degree or still enrolled at the same institution.

14. *Social Integration* – Refers to students who persist in college socially.

15. *White* – Refers to Americans of European ancestry. White and Caucasian groups are used interchangeably.

### *Chapter Summary*

The persistence of all students beyond their first year of college cannot be ignored. When students are successful beyond their freshmen year, they're more likely to

remain in college until degree completion. Consequently, college graduates are in a better position to compete for the higher paying jobs in the workforce. The implication of getting the higher paying job creates an economic advantage for the individual, as well as improves our economy. Today, college graduation is even more essential for all concern stakeholders.

Improvement in the graduation rate has increase over the past 30 years; however, minority students are still under-represented when compared to white students.

Nationally, minority students' graduation rate is lower than white students.

Consequently, colleges and universities are very much concerned how to improve the minority graduation rate for various reasons. First, minority persistence in higher education revealed inequities. Predominantly black institutions graduate a larger percentage of black students than predominantly white institutions. Second, improving student persistence is a factor related to college and university funding. The funding formula is used to determine appropriations for colleges and universities based on the number of students. The formula is also used to determine the budget for the institution.

Finally, finding the solutions to increasing the persistence and closing the gap between minority and white students, as well as increasing the number of minorities who attend college may solve many of our societal problems. This research explores how we can create a paradigm shift with this phenomenon.

The purpose of this study: (1) to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities. To carry out the purpose of

this study, 12 research questions were asked about gender, ethnicity and various types of universities.

The next chapter is composed of the review of literature that explains the differences with the two purposes. Additionally, the chapter provided a brief introduction followed by the history of college retention. Next, the researcher explored the retention models that provided theoretical base for this research. The researcher used Drs. Pascarella and Terenzini's model as the primary analysis framework for analyzing data.

The related factors that contributed to the retention of college students proceeds the research on the persistence of African American and Hispanic students who continued beyond the first year of college. The chapter concluded with a brief summary.

## CHAPTER TWO

### Review of the Literature

Minority college student persistence has been a vexing problem for higher education institutions and stakeholders for many years (Swail, Redd, & Perna, 2003). A large amount of money has been invested in creating support programs and services to help retain students, and make them successful until they graduate. Even with additional support, the graduation rate has not improved significantly for minorities even though the minority population in the United States is growing at a faster rate than the majority (U.S. Census Bureau, 2007). It is now critical that higher education institutions find ways to help improve college student persistence for all subgroups.

Why should college student persistence matter? Consequently, society as a whole benefits from having a larger and more representative number of young people graduating from college with skills to meet its ever changing needs (Tinto, 2006). The exact reasons for the disparity of the retention rate between African American, White, and Hispanic students signaled the importance of finding a solution to the problem and keeping college students in school until graduation.

Clearly, colleges understand that they will gain financially from state and federal funds for increased persistence among particular subgroups. They will also gain by discovering how to reach this fast growing group by enhancing the number of overall students enrolled in their universities. In other words, it extends their reach into this market. Still, despite many years of research on student persistence and attempts at theory building, there is still much to do to improve minority persistence (Tinto, 2005).

To guide institutional action, a solid model is needed to increase students' persistence beyond their freshmen year and improve the minority graduation rates on all college campuses.

### *History of College Retention*

This chapter reviews literature related to retention of college students in the following eras: a) 1600s – mid-1800s; Retention Pre-History, b) Mid 1800s – 1900; Retention Evolving, c) 1900 – 1950; Early Developments, d) 1950s; Dealing with Expansion, e) 1960s; Dropout Prevention, f) 1970s; Building Theory, g) 1980s; Enrollment Management, h) 1990s; Broadening Horizons, and i) Early 21<sup>st</sup> Century. These eras provided a base for identifying the historical stages that show how retention in American institutions has evolved. Each of the eras discussed in Chapter Two represent a common theme during that time. Additionally, the eras included students, campuses, educational roles, socioeconomic contexts, policies, interventions, and a knowledge base that have been interwoven into this historical perspective of contextual influences.

For many years, college persistence and attrition rates have been two of the most discussed topics in higher education (Swail, Redd, & Perna, 2003). Tinto's (1987) social and academic integration model was reported to increase students' persistence in college until degree completion. Additionally, this chapter provided other theoretical model by Spady, Pascarella and Terenzini, Wyman, Bean, and Astin that also were used to increase student persistence.

### *1600s – mid-1800s; Retention Pre-History*

The significance of a college degree had no importance in early American society. Higher education was such a small enterprise that there was no reason to consider college. During this early period, Harvard, (1636), William and Mary, (1693), and Yale, (1701) were established. These institutions were established as extensions of their respective churches and catered to specific populations. The goal of the institutions was to educate young men to satisfy the demand for pastors and missionaries among the various Christian religions. In fact, during the 17th century, all early colleges were predominantly denominational, and over two-thirds of the graduates became ministers (Geiger, 1999).

Then as the colonies developed and expanded, the pressure to allow more freedom and flexibility in higher education prevailed. However, most of the institutions at this time were unstable and did not remain open long enough to establish a graduating class. During the time of rapid expansion of American colleges in the 1800s, private denominational colleges emerged, and the enrollment increased 80% (Geiger, 1999). The largest expansion of colleges occurred in the 1820s and 1830s. However, during the 1840s, the outlook on college education changed because of economics.

### *Mid-1800s – 1900: Retention Evolving*

During this era, retention of students in American colleges was not important because the actual degree attainment was rare. Only during the late 19th century did an increase in degree attainment come with an expansion of the curriculum and options that provided a more complete college experience. This period marked a change in college admission for men of various denominations and ages and educated young men from the

teenage years to their late 20s. The emphasis was placed on children from elite families with goals of attaining skills comparable to their fathers. Consequently, college life and academics became one of the most important parts of student experiences. In fact, students participated in social events where men routinely played card games, stole from their neighbors, as well as indulged in drinking (Horowitz, 1987).

It was only when the numbers of college students increased that the importance of student life was recognized. In fact, for recruitment purposes, colleges created programs that promoted a well balanced academic and social life (Seidman, 2005). A great many extra-curricular activities emerged at this time to create campus loyalty. However, the literature did not indicate if such efforts improved retention (Seidman, 2005).

### *1900– 1950: Early Developments*

The first 50 years of the 20th century (1900-1950) were characterized by constant enrollment increases to keep up with the number of new institutions. At this time, the early 1900s college enrollment count consisted of 2,000 students. From 1910 to 1915, the college enrollment grew to 5,000 students (Geiger, 1999). In 1925, the United States had 110, 000 students attending 1,000 colleges (Goodchild, 1999).

When the nation became more industrialized, the growth and stability of colleges improved because industrialization and urbanization influenced the need to produce managers and professionals to run the complex work of the nation (Goodchild, 1999). It was when colleges began to define themselves as elitist institutions. In fact, this concept brought on a national recruitment to select the top students to higher education (Goodchild, 1999). During this time, the increase in selective admissions policies led to a creation of many new institutions (Geiger, 1999). Previous literature revealed that most



of these new institutions were coeducational or women's colleges (Goodchild, 1999) as women became an increasingly larger part of the undergraduate population. Conversely, African American students were prohibited from attending well established institutions during this time period.

### *1950s: Dealing with Expansion*

This period saw an enrollment growth of 2 million students attending over 1,800 colleges due to the Great Depression and World War II. Many of the soldiers who returned home used their GI Bill to attend and acquired skills necessary to further their careers. Harvard received the largest number of applicants at this time (Geiger, 1999).

It was during this expansion period that retention became a major focus for educators, researchers, and institutions. Specific emphasis and attention were placed on why students were not remaining in college and getting college degrees, along with the social and academic patterns of student retention. In 1954, a decision (Brown vs Board of Education) granted African Americans access to white institutions of higher learning thus creating equitable opportunities for African Americans to further their education. Furthermore, the implementation of this decision suggested that African Americans would matriculate hurriedly and graduate from predominantly white institutions at the same or greater rate as they had achieved at predominantly black institutions (Arminio et al., 2000). Unfortunately, at this time in history, this was not the case.

Prior to 1954, the majority of black or African American students attended predominantly black institutions (PBI). In the early 1970s, three-fourths of African American students attended predominantly white institutions (PWI). Although reports showed that the enrollment for African Americans at PWIs increased, PBI's still

graduated a disproportionately larger number of black students than their predominantly white counterparts (Allen, 1992; Easley, 1993).

### *1960: Dropout Prevention*

This period was highlighted by the civil rights movement, which in turn created postsecondary opportunities for African Americans, and other minority groups that were previously not available to them. As institutions increased their minority populations, many campuses were not prepared to deal with a diverse student body. In particular, African Americans were not prepared to face the educational challenges of higher education although, at this time, higher education curricula were revised to prepare students for new kinds of jobs and careers; the pressure to maintain good grades and continue on for advanced degrees grew. But the focus of higher education shifted from well rounded college career to a profession. This thinking caused dissatisfaction among many students who wanted institutions to return to the idea of “intellectual challenge, flexibility, and understand the recognition of individuality” (Horowitz, 1987, p. 126).

Higher education changed rapidly when an increased number of students entered college under-prepared at this time. Thus, institutions struggled with how to improve access to degree attainment, and retention of students. Patterns of student persistence in college were regularly monitored to discover why some students remained in college and others did not. To find the answer, research studies on students’ departure from college were conducted using psychological lenses (Summerskill, 1962). This lens focused on personality attributes such as maturity, motivation, and disposition as the main factors for persistence and non-persistence in college. Each had its own unique usage.

### *1970s: Building Theory*

Retention in college was the most discussed topic during the 1970s, and the concerns of many institutions increased as the dropout rate increased. This topic created so much tension that colleges and universities attempted to systematically identify the causes and solutions of student dropout to keep students in college. Spady (1971) introduced studies that were philosophical, census, autopsy, case, descriptive, and predictive. Vincent Tinto enhanced Spady's (1970) model about the nature of student departure. Tinto's model suggested that early continuous institutional commitment impacted both academic and social integration, which was important for college student retention (Tinto, 1975, 1987, 1993).

### *1980s: Enrollment Management*

During the 1980s, research on student retention increased and the concept of enrollment management emerged. When the demographic shift in enrollment occurred, the institutions' interest about retention increased. The goal of student enrollment management was to maintain an optimal size student body in terms of numbers and quality. The term enrollment management was defined as:

Both an organizational concept as well as systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments. This was accomplished by institutional research in the areas of student college choice, student attrition, and student outcomes to guide institutional practices of new recruitment, financial aid, student services, curriculum development, and academic areas influenced by enrollment and the persistence of students. (Hossler, 1988, p. 172)

Seemingly, each era was more important in terms of authority and effectiveness (Kemerer, Baldridge, & Green, 1982). To integrate student enrollment management into the system, most institutions developed committees that were made up of faculty

members and administrators. The 1980s student enrollment management theory was important because it dominated retention practices and gave institutions more latitude in terms of size and the quality of student attending the institution (Kemerer, Baldrige, & Green, 1982).

### *1990s: Broadening Horizons*

The priority of this period was to study retention trends in American higher education. Many researchers during this time used Tinto's interactional model to determine why students remained in or departed from college. Tinto's theoretical model tested the consistency of using certain propositions. Some of the propositions were found to be interconnected based on the results in one study (Braxton, Sullivan, & Johnson 1997).

The propositions were defined as: a) students bring to college different entry characteristics which will impact their initial commitment to the institution; b) a student's initial commitment to the institution will impact the student's future commitment to the institution; c) the students' continued commitment to the institution is enhanced by the level of social integration realized early; d) the greater the level of commitment to the institution, the greater the likelihood of the student being retained to graduation. It was suggested in earlier research that future researchers examine additional psychological, social, and organizational influences that impact both social integration and commitment (Braxton, Sullivan, & Johnson, 1997) to improve upon Tinto's theory.

### *Early 21st Century*

This period marked certain issues regarding retention. The retention problems caused a number of researchers and practitioners to assemble and discover how to retain college students across the country. Reports revealed that about a fourth of students do not return to college after their first year (Devarics & Roach, 2000). However, some colleges had a considerably lower dropout rate. Due to the initial entry process at open enrollment campuses, the dropout rate was much different. Open enrollment was defined as admitting to college all high school graduates in an effort to provide a higher education for those who desired it (Devarics & Roach, 2000).

Undoubtedly, black students faced challenges at PWIs, even though there were apparent solutions to help lessen the challenge. According to Karpinski (1996), hiring African American faculty and staff was one solution. Other researchers suggested providing support services that target African American students, implementing cultural and social services, and devising comprehensive retention plans (Arminio et al., 2000).

Therefore, the history of retention revealed more than was expected. Thus, recognizing the complexities of student retention and how it has evolved over the centuries supports the need to continue looking for ways to help students succeed. Would the future be as supportive to finding a solution as the past? The answer can be found in how well future researchers continued to expand upon the existing models and literature.

### *Retention Models That Provided a Theoretical Basis of this Research*

The researcher reviewed previous college models that were created to address the dropout rate on college and university campuses. Professors Pascarella and Terenzini

created a model from Tinto's (1987) model, which was the theoretical model proposed for this study. Other researchers, such as Spady (1971), and Wyman (1997) provided supporting knowledge as to the validity and reliability of Tinto's model. Additional attention was given to models by Bean (1980) and Astin (1993) because their empirical testing of the models provided a rationale for the selection of Tinto's model as a theoretical base for this study. Other researchers provided insight about factors, theory, and predictability of Tinto's model of student retention and departure from college.

Additionally, Pascarella and Terenzini's (1980) Institutional Integration Scales Survey on college student retention was adapted from Tinto's models (1975, 1987, and 1993) on college student departure and the instrument was used by the researcher to conduct field research. Permission to use their Institutional Integration Scale Instrument was obtained from Ernest Pascarella and Patrick Terenzini (Appendix A).

### *Tinto's Model*

Tinto's Student Departure Model theorized that a student's academic and social interactive experience within an institution affected a student's departure decision. Therefore, in trying to find a way to explain how students are acclimated to college life, Tinto (1987) turned to Durkheim's theory of suicide. Both suicide and student college departure behaviors represented a form of voluntary withdrawal from a situation, and signaled similar forms of rejection. From Durkheim's work, Tinto (1987) formed four conclusions as to why students departed from college: altruistic, anomic, fatalistic, and egotistical. According to Tinto,

Altruistic departure occurs when an ideology develops that affirms the action, as existed in this country in the late 1960's when many students left college as a form of protest. An anomic departure occurs when conditions on a given campus

are in such turmoil that the norms of successful student life are completely disrupted. A fatalistic departure occurs if an individual becomes oppressed under the structure and red tape of the institution and simply is not able to beat the weight of it any longer. Egotistical departure speaks to the individual who is not successful in finalizing the third stage of Van Gennep's rite of passage. This individual fails to become integrated into both the intellectual and social fabric of the institution. (Boyle, 1989, p. 289-290)

Tinto's (2006) theories, although paradigmatic in the field, expressed the importance of integrating students into campus life, both academically and socially. As a direct result, students believed they belonged there and were less likely to dropout of college.

Tinto's (1975, 1987, 1993) model described the longitudinal process of interaction between the students with a set of given attributes, skills, and dispositions (intentions and commitments) and the academic and social systems of the institution. The model reflects the combined academic and social components of student life and the interaction between the academic and social components (Figure 1). Tinto (1987, 1993) argued that a certain amount of academic and social integration, as well as belonging, must exist to prevent student departure from college. He further added that the institutions with high attrition rates were more likely to be those that had not been able to integrate their students into campus social and intellectual life.

Specifically, Tinto's Integration Model suggested that retention was related to the student's ability and actions to become an involved actor in the institution (Tinto, 1987). In particular, the degree that students were successful in their pursuits determined the degree that they were committed to their career and educational goals, as well as to the institution. Researchers, such as Pascarella, Terenzini, and Wolfe (1986) referred to "a person-environment fit" as the model's conceptual core (p. 156). The principles of

Tinto's model supported by the research of Braxton and Mundy (2001-2002) included the following description of institutions that have effective retention programs:

First, committed to the students they served; secondly, that institutions had a commitment to the education of all students, not just a few of the elite ones; lastly, that institutions were committed to the development of supportive social and educational communities in which all students were integrated as competent members. (p. 94)

Tinto's model required the need for a match between the institutional environment and student commitment (Braxton & Mundy, 2001-2002).

Additional work by Tinto (1993) led to the development of a longitudinal, explanatory model of departure. An expanded version of his work included "... adjustment, difficulty, incongruence, isolation, finances, learning, and external obligations and commitment" to his original model (p. 112). Tinto's model, according to Pascarella, Terenzini, and Wolfe (1996) revealed "the stronger the individual's level of social and academic integration, the greater his or her commitment to the institution and goals of college graduation" (p. 155-156).

Recognizing the differences between groups of students (i.e., at-risk, adults, honors, and transfer), Tinto's (1993) work had distinctly different circumstances requiring groups-specific retention policies and programs. He reasoned that the differences in the types of postsecondary institutions (i.e., nonresidential, two-year, urban, and large public) required different types of policies and programs.

Furthermore, Tinto (1993) expanded the social integration variable used in Spady's (1971) model by including frequency and quality of student-faculty contact. The rationale guiding this inclusion was the level of commitment to the institution, and graduation was determined by the extent to which a student developed a sense of



socialization and achievement. This model revealed the effectiveness of measuring the retention rate of college students.

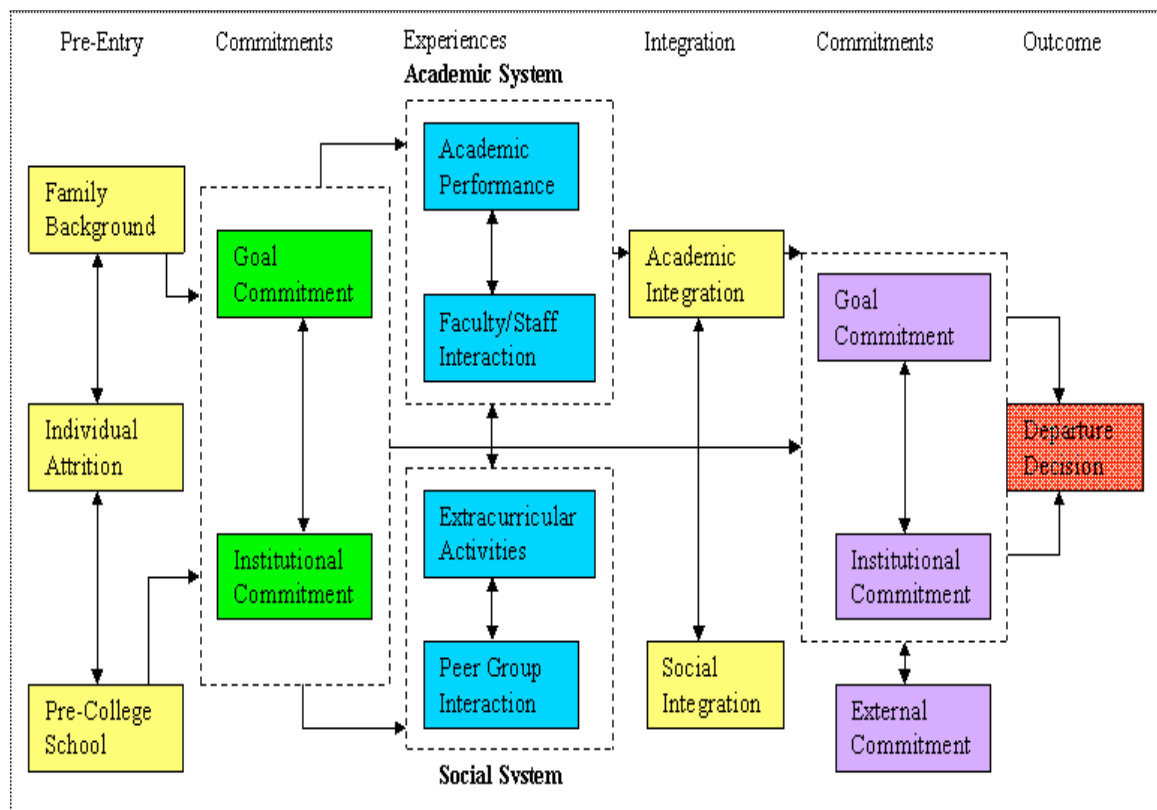
Tinto's (1987) model was comprised of five sets of variables: individual and background characteristics, initial goal and institutional commitments, social and academic integration, subsequent commitments, and a dropping out of college decision. Hence, the students' background characteristics, intentions, external commitments, the external community, and institutional experiences influenced students' decisions to remain in college. It was Tinto's belief that students started college with certain background characteristics. Such characteristics included the students' family background, skills, abilities, and previous education, in addition to their individual goals and institutional commitment. Over time, as students became acclimated to college life, formally and informally, they were more likely to integrate into the academic and social systems of the college.

A little later in 1993 Tinto believed that the academic system of the college environment consisted of a student's academic performance, which was formal. Conversely, the students' out of class interactions with faculty were considered informal. Their social systems were formed by extra-curricular activities that were formal, as well as the students' interactions with their peer group.

The academic systems' activities center within the classroom and laboratory of the institution involved certain faculty and staff whose primary responsibility was to educate students. Social systems were structured for daily life and personal needs of various college members. (p. 106)

In light of the research that has been conducted over the years, little work has been devoted to developing a consistent model as a base for measuring student retention (Keller, 2001; Reason, Rendon, Jalomo, & Nora, 2000). Although, college

administrators were more likely to recognize retention models that focused on full-time, traditional age, and residential students (Reason, 2003; Tinto, 1993), they were less likely to recognize how these models would support non-traditional students. However, Tinto developed a model that revealed how social and academic integration, goals and commitment factors were important in determining college retention (Figure 1).



*Figure 1. Conceptual model of student departure decision from college (Tinto, 1987)*

#### *Test of Model's Applicability*

Tinto's (1987) Student Departure Model shown on this page has been subjected to a considerable amount of empirical testing, and largely support the predictive validity of the model on a variety of variables (Brunsden, Davies, Shevlin, & Bracken, 2000). In fact, most aspects of Tinto's model have been reviewed, as Boyle (1989) pointed out in

his review of several research efforts. Boyle indicated that Tinto's model provided an institution a clearer understanding of student departure which was a necessary first step in understanding the problem.

### *Spady's Model*

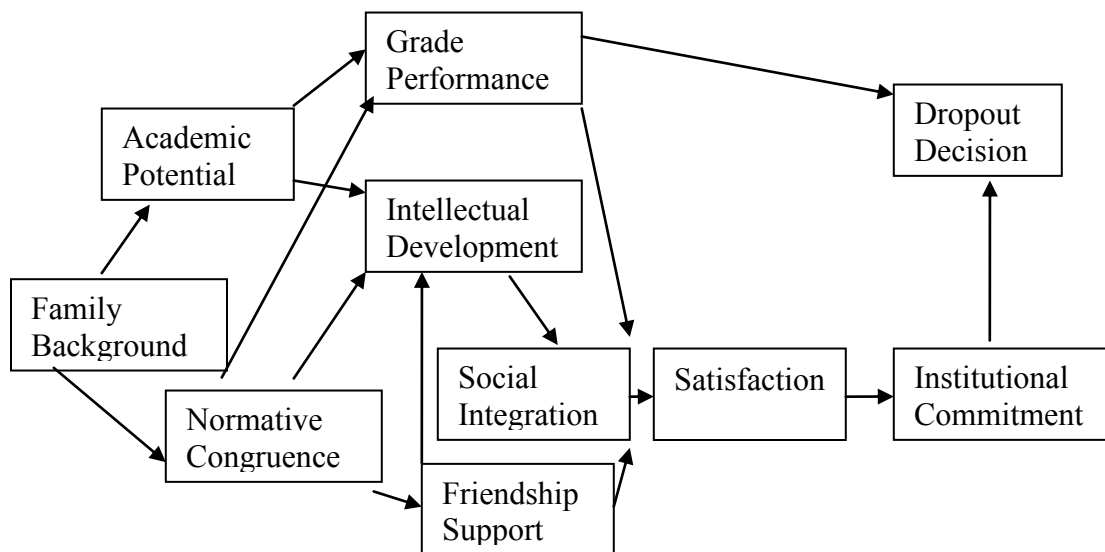
Spady's (1970) Model of the College Dropout Process provided the first significant research on the issue of retention. It also provided a theoretical model of the college dropout process in higher education. Spady's model, like Tinto's (1987) model, (Figure 1) was also based on Durkheim's (1966) theory of suicide. In addition to Tinto's model, Spady also compared Durkheim's concept of suicide to the concept of involuntary student departure from college. Durkheim summarized that "suicide varied inversely with the degree of integration of the social groups of which the individual forms a part" (p. 209).

The *Engaging Faculty and Staff and Students Handbook* (Texas Guaranteed Student Loan Corporation, 2008) affirmed Spady (1970) was one of the first researchers to suggest that Durkheim's (1966) theory could be used to describe why students leave higher education. According to Spady, the social integration of students increased the probability of academic and social success in the institution.

Spady's (1970) research model linked suicide to dropouts from college. He stated, although dropping out was clearly a less drastic form of rejecting social life than suicide, we can assume that the social conditions that affected the former paralleled those that produced the latter: a lack of consistent, intimate interaction with others, holding values and orientations that were dissimilar from those of general social collectivity, and lacking a sense of compatibility with the immediate social system. (p. 78)

The Spady (1970) model perceived a parallel process occurring in college students who dropped out, although not as drastic as suicide. This model referred to

students who did not share values and orientations similar to other students on campus, as well as those who did not interact socially with students and generally did not feel compatible with the social system in college. Additionally, Spady's work emphasized the importance of these interactions (Figure 2). The variables were all inter-connected. Thus, Spady envisioned adjustment to the college retention model as a longitudinal process of interaction between students and the academic and social systems within the institution. The research revealed the degree to which students became integrated into the social and institutional systems, together with the background characteristics they bring, and academic potential influenced by the student's decision to withdraw or remain in college.



*Figure 2.* Spady's replication model (1970)

Spady's (1970) sociological model was comprised of five independent variables, which were normative congruence, friendship support, grade performance, intellectual development, and social integration (Figure 2). Later, two intervening variables were

added to the model (satisfaction and institutional commitment). Academic potential and family background were later added to the model linking all the variables together in a way that combined them sequentially and causally. Spady's research suggested that entrance into an institution of higher learning constituted a new society for the students, which required to some degree these students to break the ties to their past society. Conclusively, he argued that breaking the ties created confusion and insecurity in students that resulted in anomic suicide in the form of increased attrition rate.

#### *Pascarella and Terenzini's Model*

This model was adapted from earlier works of Spady (1970), and Tinto (1975), which was used to back up the inclusion of different sets of variables on the college dropout process. The model emphasized the interaction between student and faculty as being important to students' educational outcomes, as well as persistence in college. Students who were integrated into the social and academic life of the institution were much more likely to experience increased academic development during their years of college.

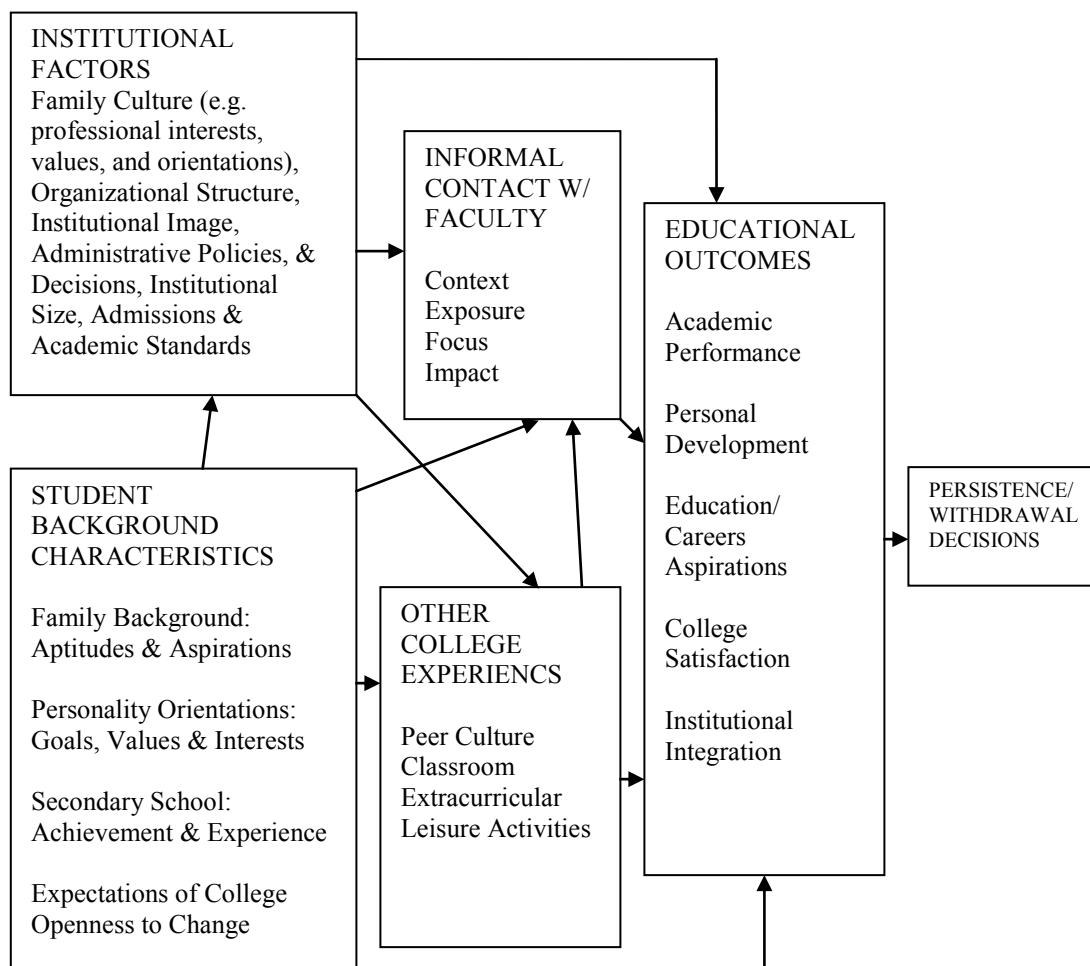
Later, this model was expanded to include personal growth and social functioning. The argument was that Pascarella and Terenzini's (1980) model of cognitive outcomes were largely influenced either directly or indirectly by the variables of background characteristics and goal commitment. Student background characteristics consisted of the following variables: sex, race, academic ability, secondary school performance, and family social status. Goal commitment consisted of such variables as highest degree expectation, and importance of graduating from college.

The influence of these variables determined whether freshman college students would persist or dropout. In addition, how students interacted with faculty and the institution's social and academic systems subsequently became important. Tinto (1975) stated, that "Between the individual characteristics, prior experiences, and commitments; it was the individual's integration into the academic and social systems of college that most directly related to student continuance in that college" (p. 96).

The predictability and validity of Tinto's (1975) model used in a small number of studies supported the validity of Pascarella and Terenzini's (1980) Institutional Integration Scale Instrument that was selected to conduct the field research of this study. The outcomes of this model suggested that interesting differences were observable in the patterns of influences that existed when the data were disaggregated by institutional types (Pascarella & Terenzini, 1983). Therefore, this instrument was proven to have validity and reliability over a course of several years. The researcher used Dr. Pascarella and Terenzini model as the primary theoretical framework and interpretation of data.

The model in Figure 3 significantly contributes to retention theory which is an expansion of the student-faculty interaction concept adapted from both Spady (1970) and Tinto (1975). It is a longitudinal model that has many independent variables. The use of multiple variables made this model comprehensive and valid. Historically, a substantial amount of research revealed that the college impact of these factors suggested students' interactions with the college environment were not independent of particular background characteristics that students bring to college (Astin, 1975; Centra & Rock, 1969; Thistlethwaite & Wheeler, 1966). Therefore, the importance of studying college attrition and Tinto's model suggested the extent to which the assessment of different levels of

social and academic integration, institution, and goal commitment contributed to the prediction of persistence in college when the influence of pre-college characteristics were taken into account (Pascarella & Terenzini, 1980). Conversely, Pascarella & Terenzini (1997) extensive research showed that a students' lack of interaction with the faculty and social groups within the institution was the most important predictor of student withdrawal. This research suggested that what happens to the students after entry into the institution was more important than what happens before.



*Figure 3.* Pascarella's replication model of college student attrition

### *Wyman's Model*

Although research has been conducted on retention in higher education using different methods and approaches most of the research has been conducted at four-year colleges and universities rather than at community colleges. An examination of students at two-year colleges revealed consistent similarities to four year universities. Student interaction with faculty and academic factors coincided with previously mentioned models.

The importance of this model revealed two significant variables relative to other previous models. First, significant variables were the institution's factors, which included culture, policies, size and organizational factors found in Wyman's (1997) study. The findings suggested that student retention was strongly related to internal and external institutional factors. A second significant variable was the ratio of academic support provided to students. The study found that the retention rate was partially controlled by forces external to the institution that largely predetermined retention rate differences.

Moreover, according to Wyman (1997), in spite of the considerable advancement made in understanding individual retention rate, there were many questions about retention rate that still needed to be answered. Questions such as: a) Do retention rates measure the institutions effectiveness; b) If so, does a high retention rate portray an institution's effectiveness at retaining students by shielding them from the grasp of attrition, or does it reflect the selective admission policy of that institution? These unanswered questions present a few interesting speculations. Therefore, it was unfair to



review comparison of institutions' effectiveness on the basis of retention rates only at four year institutions.

### *Bean's Model*

A psychological process model of college student departure explained the factors that contributed to student attrition. An adaptation from a model on organizational turnover, the Bean (1980) model attempted to explain employee turnover in work organizations:

. . . the background characteristics of students must be taken into account in order to understand their interactions with the environment of the institution of higher education. . . . The students interacts with the institution, perceiving objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures, such as practical value of the education and the quality of the institution. The variables were expected to influence the degree to which the student was satisfied with the institution of higher education. The level of satisfaction was expected to increase the level of institutional commitment. Institutional commitment was seen as leading to a degree in the likelihood that the student will drop out of school. (pp. 158-160)

The findings in Bean's (1980) study revealed that:

. . . institutional quality and opportunity for men, while excluding satisfaction for women were the two most important variables influencing commitment; therefore, men left the university even though they were satisfied, and women who were satisfied were more committed to the institution and were less likely to leave college. (p. 178)

In a revised study, Bean (1985) found that:

. . . student peers are more important agents of socialization than is informal faculty contact; students may play a more active role in their socialization than previously thought; and college grades seem more the product of selection than socialization. (p. 35)

Bean's model of faculty involvement included social and academic contact variables, and revealed students' perceptions of academic and administrative staff that provide personal

and social needs appeared to positively influence college persistence both directly and indirectly, particularly for females (Bean, 1985).

### *Astin's Model*

Typically, retention and attrition were defined as two sides of the same coin. Retention means staying in school until degree completion and attrition was leaving college prematurely for various reasons. Although seemingly simplistic terms, nonetheless, retention and dropout were purely perceived as opposites of each other.

Over three decades, Alexander Astin (1971) said it best in his book on the dropout concept, “*Predicting Academic Performance in College*”:

The so called dropouts may ultimately become non-dropouts and vice versa . . . But, there seemed to be no practical way out of the dilemma: A “perfect” classification of dropouts versus non-dropouts can be achieved only when all of students had either died without finishing college or had finished college. (p. 15)

Additionally, Astin explained that defining dropouts was even more difficult because of the prevalence of students’ enrollment in several different institutions throughout their educational career.

Astin’s (1984) developmental model of student involvement, clearly demonstrates that students learned more when they are involved in both academic and social aspects of their collegiate career experience. Furthermore, Astin stated:

An involved student was one who devoted considerable energy to academics, spends much time on campus, participated actively in student organizations, activities, and interacted often with the faculty. (p. 292)

Thus, colleges must understand that the more quality resources available, the more likely the students were involved and developing. Similar to Bean’s model, high quality university programs and policies reflect institutional commitment to students. These

programs and policies are necessary for student growth which includes faculty interaction both inside and outside the classroom. The college environment also played an intricate role in the development of the students. Astin's (1984) work was designed "to identify factors in the college environment that significantly affected the student's persistence in college" (p. 302).

Astin's research (1993) also involved an empirical study of a previous model. Using longitudinal data collected from an annual survey of freshmen at the University of California, he found that the three most important forms of student involvement were academic involvement, faculty involvement, and involvement with student peer groups. Furthermore, Astin stated, "The student's peer group was the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

Other studies revealed both parent education and income were both linked to the affects of college completion directly and indirectly (Astin, 1993; Astin & Oseguera 2003; Mow & Nettles, 1990; Oseguera, 2004). Significant predictors revealed that the student's initial aspirations and goals had also been linked to college completion (Astin, 1975; Bean, 1982; Pascarella, Smart, Ethington, & Nettles, 1987). Furthermore, the research of Carneiro and Heckman, (2002), suggested that youth from economically disadvantaged families are lacking in parent resources or influences, which can have a negative impact on cognitive abilities, motivation, study habits, perceptions of social benefit of a university education, and social environments. Hence, the higher the level of one's educational or occupational aspirations, the greater the likelihood of degree attainment.

A few studies provided support for social integration, as it was also useful in examining degree completion (Allen & Nelson, 1989; Cabrera, Nora, & Castaneda, 1992-93). The findings were confirmed in multi-institutional studies that defined social integration in terms of measures such as peer relations, participation in extra curricular activities and student clubs, participation in student government, and satisfaction with social life (Astin, 1993; Braxton, Vesper, & Hossler, 1995; House, 1996; Munro, 1981).

In a recent study, Rhodes and Nevill (2004) examined student satisfaction and dissatisfaction within an undergraduate educational cohort at a new university in the English Midlands. The cohort included “traditional” and “non-traditional” students and represented an increasingly typical “widened” community of students within higher education. Emerging themes were teaching and learning, debt and money worries, workload, and support for students. The study also suggested that student engagement represented an investment in both the institution, and the students’ education.

Another comparison used to determine college completion was public versus private institutions. When switching from four-year to six-year degree attainment, the finding suggested that many students took longer to complete their degrees if they attended a public rather than a private college or university (Astin, 1993). There were many possible reasons for this effect identifying larger size and impersonal atmosphere of many public institutions (Astin, 1993). Nonetheless, degree completion was a complex phenomenon that was affected by a variety of student pre-college characteristics, contingencies, and institutional characteristics. Additionally, personal characteristics contributed significantly to degree completion.

A characteristic found in the institutions that had the strongest effects on the students' chances of completing a college degree was selectivity of the college or university attended (Astin, 1993). The more selective the institution was, the better the students' chances of finishing college. Attendance at public colleges revealed that the students' chances of finishing college were not as high as at private institutions.

### *Retention of Students Beyond the First Year of College*

Historically, much has been written about college student persistence beyond the first year. The variables that impact student retention are cited in numerous works on academic and social integration of students on campus (Pascarella & Terenzini, 1979, 1980; Bean, 1980), on different sources and forms of support systems (Nora & Cabrera, 1996; Nora, 2004), on student finances (Cabrera, Nora, & Castaneda 1992-93; Olivas, 1986; St. John, Cabrera, Nora, & Asker, 2000-01), and on discriminatory behaviors and gestures (Cabrera & Nora, 1994; Nora & Cabrera 1996). These researchers identified the adjustments college students go through in order to reach academic success or to move from first year to the next. Because practitioners and researchers placed so much attention on first year college students, the problem of attrition has shifted to subsequent years.

Moreover, many qualitative and quantitative studies were undertaken to study the phenomenon of student persistence in college until degree completion. Such researchers as Braxton and Brier (1989), Rendon, (1994), Hurtado and Carter (1997), Pascarella and Terenzini (1990), and others modified and added additional factors that were found to impact the decisions of many college students to remain in college or drop out,

temporarily or permanently. An accumulation of these efforts had led to the creation of another model called Student/Institutional Engagement Model (Nora, 2004).

Based on the number of previous studies performed on student persistence, a descriptive profile has been identified that disaggregates disparities by gender, ethnicity, and financial status from year-to-year. Additional research has revealed that the persistence between genders varied extensively (DuBrock, 1999). More women were likely to persist beyond their first year of college than men. Recent research revealed two additional factors that impact students' beyond the first year of college: their mother's educational level and if the family is low-income (Ishitani & DesJardins, 2002-03).

### *Factors Related to the Retention of College Students*

Braunstein, Lesser, and Pescatrice (2006) found that for many freshmen ethnicity/race, high school grades, family income, and financial aid grants have a positive effect, and are significant factors in determining whether or not a freshman student is retained. In addition, special programs also play an important role in the success of minority students. One program proven to be successful is the Student Support Services formerly known as Special Services for Disadvantaged Students. McCants (2002) explained the program was aimed at helping low income and first generation college students and individuals with disabilities graduate from college.

Additional characteristics related to college retention were found in multiple institutional studies. Historical researchers have found that the size, costs, and university selectivity affected a variety of outcomes, including degree attainment (Astin, 1993; McClelland 1990; Smith, 1990). In a national longitudinal study of undergraduates, Astin and Oseguera (2003) and Oseguera (2004) confirmed a study by Astin, Tsui, and

Avalos (1996) that small college size, and selectivity had a positive effect on college retention. Furthermore, research on institutional control (private vs. public) revealed some inconsistencies; however, the historical research did suggest attending a private rather than public institution netted positive results for degree attainment when controlling for pre-college characteristics (Astin, 1977; Thomas & Bean, 1988).

Institutions with a large percentage of student commuters were seen as a negative influence on four-year and six-year degree completion (Astin, 1993; Oseguera, 2004; Sjoberg 1999). When students commuted to and from college, the institution lost its ability to create a climate that promoted student engagement with campus resources, facilities and faculty. In fact, research by Oseguera (2004) and Sjoberg (1999) explained that student retention is enhanced in institutions that had large expenditures on instruction, academic support services, and a lower student-faculty ratio.

### *Pre-College Characteristics of Students*

For years, researchers found that one's individual background substantially defined the chances of degree attainment (Astin, 1993; Carter, 2001; Tinto, 1993; Terenzini, Lorang, & Pascarella, 1991). Variables such as high school grades, gender, ethnicity, parental control, education level, standardized test scores, and even age were consistently found to be the strongest predictors of degree attainment for undergraduates (Astin & Oseguera, 2003; Titus, 2003). In a few cases, research suggested that standardized test scores may not be a strong predictor of degree attainment for students of color.

Fleming and Garcia (1998) evaluated 12 studies for predictive factors of degree attainment and found test scores and grades differed in the ability to predict retention

among non-white students. In addition, student involvement and a variety of emotional and social variables have also been demonstrated as possible predictors of student success (Astin, 1984; Boulter, 2002; DeBerard, Spielmans, & Julka, 2004; Ridgell & Lounsbury, 2004; Spitzer, 2000).

Seventy-five percent of students who drop out of college do so during their first two years, and 57% of students leave their first college without graduating (Tinto, 1993). In addition, a student's first year grades were significantly linked with retention (Gifford, Briceno-Perriott, & Mianzo, 2006; Reason, 2003). Since grades and standardized test scores' are quantifiable the results can be used to validate whether students will remain in college.

### *Gender*

Research reviewed on gender has been mixed in regard to retention. Is gender an important factor? More than half of today's college students are women (Chronicle of Higher Education, 2003). In a study of nearly 23, 000 students at three community college campuses over a three year period, the first and second semester persistence was greater for women than men (Rajasekhara & Hirsch, 2000). Conversely using data from ACT, Inc. Reasons, (2001) conducted a study and found that gender failed to reveal significance importance. Additionally, gender also played a less significant role in a study by St. John et al. However, in a study conducted by DeBerard and Julka, (2000) gender was selected as a demographic risk factor primarily because it had been shown to be a statistical correlate of both first semester GPA and first semester academic warning. Despite the disparity of significance, gender appeared to show significant differences for some researcher and less significance for others.



### *College Selectivity by Students*

College selectivity appeared to be a factor in student retention. Pascarella and Terenzini (1991, 2005) reviewed literature on college selectivity by students and concluded that selectivity tended to enhance persistence after variations in background characteristics of students at different institutions were taken into account. Researchers compared four and six year public institutions graduation rates that grant bachelor degrees and found public institutions had lower graduation rates than private institutions (Scott, Bailey, & Kienzi 2001). In a study conducted by Titus, (2004) he found that selectivity, as measured by the average student's academic ability at an institution, had a contextual effect on college student persistence that reflects a positive increment to the chance of persistence.

### *Education Level of Parents*

Parents with degrees have a higher knowledge base to provide planning information and resources than parents with less education. Education level and the income of parents were shown to affect the retention rate by students directly and indirectly (Oseguera, 2004). According to (Institute for Higher Education Policy, 1998) parents who have not attended college provide fewer educational tools to assist their children with college planning. Recently, (Horn & Nunez, 2000) reported parents who have not attended college were less likely to discuss college with their children. Furthermore, children from poor families were much more likely to not have sufficient familiarity with social and educational systems; therefore, they lack access to information and resource networks (Gandara, 2001). For years, the educational level of parents has shown to affect the chances of students attending college and retention rate.

Many students attend college for various reasons one of which being parental influence. In a recent study, African American and Hispanic parents were significantly more likely to emphasize it than white parents (Immerwahr, 2000). African American students believed they should attend college to do better than their parents, and to overcome economic and social hardships (Freeman, 1999; Institute for Higher Education Policy, 2001). Hispanic parents believed that a college education expands their children's career and economic opportunities, especially Hispanic immigrants who often come to the United States to gain employment and provide better educational opportunities for their families (Gándara, 2001; Ginorio & Huston, 2001). Thus, parents' education level and income affect students significantly.

### *College Grade Point Average*

Historical data revealed a student's high school grade point average (GPA) positively influenced college academic performance (Cabrera & Nora 1994; Cabrera, Nora, & Castaneda, 1992-93; Nora & Cabrera, 1996). More recent research revealed that the use of GPA and class rank was widely used as a positive predictor of academic success in college (Hoffman & Lowitzki, 2005; Schwartz & Washington, 2002). However, Schwartz and Washington focused their study on the academic achievement of freshmen African American men at historically black colleges and universities to determine the extent of validity. And what did Schwartz and Washington find? African American students at historically black colleges performed better than African American students at predominately white colleges. Recently, Spitzer (2000) found in a study of 355 full-time undergraduates that a student's GPA positively predicted success in college.

Later, Ishitani and DeJardins, (2002) found that the higher the first-year students' GPA, the less likely the student was to leave college.

### *Faculty-Student Interactions*

Does faculty interaction with students increase the retention rate of students?

Previously, Pascarella and Terenzini (1991) concluded in a study that “freshman to sophomore persistence was positively and significantly related to total amount of student-faculty non-classroom contact with faculty and particularly the frequency of interaction with faculty to discuss intellectual matters” (p. 394). More specifically, Lunquist, Spalding, and Landrum (2002-2003) found that specific faculty behaviors contributed to student persistence, such as faculty members being supportive of student needs, being approachable, and returning telephone calls and emails in a timely manner. Also researchers, Umbach, and Wawrzynski, (2005) conducted a study using two national data sets to explore the relationship between faculty practices and student engagement. Findings suggested that students report higher levels of engagement and learning at institutions where faculty members use active and collaborative learning techniques, engage students in experiences, emphasize higher-order cognitive activities in the classroom, interact with students, challenge students academically, and value enriching educational experiences.

### *SAT Score*

The academic ability of students measured by SAT score revealed that students with higher scores were more likely to remain enrolled in college (DuBrock, 1999; Ishitani & DesJardins, 2002-03). Many times, students who scored in the lower-

percentile of the SAT had higher attrition rates. A common criticism on many college campuses is the lack of academic preparedness of college entrants as they matriculate from high school (Malveaux, 2005; Orfield, Losen, Wald, & Swanson, 2004; Rowley, 2000). Breland et al. (2002) reported the following factors were most important when determining college admission and student retention: a) high school GPA or class rank, as determined by the high school, b) admissions test scores (e.g. SAT/ACT), c) pattern of high school course work, d) college-level coursework in high school (AP, IB, or dual credit), e) AP coursework specifically, and f) AP course grades.

### *Economic Preparedness of Students*

Research on student persistence in college indicated that finances played an important role in student withdrawal decisions (Cabrera, Hagedorn, & Pascarella, 1996; Cabrera, Nora, & Castaneda, 1992-93; Nora & Cabrera, 1996). According to U.S. Census Bureau, (2005), between 2003 and 2004, family income grew by 0.6%, to \$54,419. Although growth has occurred, educators were still concerned that financial aid based solely on academic achievement decreased college opportunities for minority low-income students. Yet, Carey (2004) actually reported that availability of financial aid was an important factor in achieving a high black student graduation rate. *The Journal of Blacks in Higher Education* reported that a study by Nellie Mae revealed that 69% of African Americans who enrolled in college, but did not finish, expressed having to leave college because of high student loan debt. Forty-three percent of white students cited the same reason (2000-2001). More recent, *The Journal of Blacks in Higher Education* reported 62.4% of all black students currently enrolled in college have no financial

support from their families (2002). This lack of outside financial resources increased the need for these students to concentrate on working rather than on their studies.

Additional historical research revealed that minority Hispanic students experience greater financial-related stress when compared to white students (Quintana, Vogel, & Ybarra, 1991). Current research revealed the stress of financing one's education proved to negatively impact the decisions to remain in college. According to Hernandez (2000), the stressor was a major contributor to college dropout. It was likely that the exceptionally high cost of tuition may outweigh the benefits of students attending college outside their home state.

### *Commitment of Students to Obtain a Degree*

Historical studies on student persistence revealed that student commitment to complete a degree was an important factor in the process of moving toward graduation (Bean, 1980; Bean & Metzner 1985; Pascarella & Terenzini, 1979, 1980). The focus of the findings centered on the student's social integration into his or her environment. Over the years, student commitment to persistence was confirmed and substantiated among various sub-groups at a variety of higher educational institutions (Braxton & Lien, 2000; Nora, 1993, 2004). When students were committed academically, socially, and financially, they were more likely to persist beyond the first year of college. Pascarella and Terenzini (1991) stated "What happens to students after they arrive on campus has a greater influence on academic and social self-concepts than does the kind of institution students attend" (p. 184). In 2003, Sax conducted a research study among minority college freshmen. Findings concluded that recent educational trends revealed a wavering picture of college freshmen as these freshmen demonstrated a stronger record of academic achievement

but had a lesser commitment to completing homework and studying for tests and quizzes. Research reflects that when students are committed to the university, they are more than likely to remain in college beyond their freshmen year.

### *Participation in Extracurricular Activities*

Contrary to some conventional wisdom that participation in extracurricular activities is detrimental to continue in college beyond first-year; there is some evidence to support the notion that students' participation in extracurricular activities is positively associated with persistence in college (Pascarella & Terenzini, 1991). A recent study indicated that students who participated in extracurricular activities tended to have higher grade point averages, better attendance records, lower dropout rates, and fewer discipline problems than the general college student population (Brown & Evans, 2002). Thus, college student retention increased. Specifically, some researchers believed that students who do not participate in intercollegiate athletics are more likely to drop out than non athletic students. Contrary to popular belief, Pascarella and Terenzini (2005) found that such participation had a positive and significant effect on persistence to graduation. This was found to be true not only for revenue producing sports, such as men's football and baseball, but for other sports, as well, even when controlling for potentially confounding factors.

### *Research on the Persistence of African American Students to Continue Beyond the First Year of College*

Hagedorn, Maxwell & Hampton (2001-2002) revealed that retention rate beyond freshmen year among African-American men in colleges are the lowest of all ethnic groups nationally. The study analyzed organizational data for three cohorts of men in a

longitudinal design for three semesters. It found significances in high school grades, age, number of courses, a positive view of personal skills, clear high goals, and the early identification of a college major appeared to be most important for the group (Hagedorn, Maxwell, & Hampton, 2001-2002).

Furthermore, statistics revealed that the rate of degree completion by black students at four-year and two-year colleges is also low when compared to other ethnicities (Hunt & Carruthers, 2004). Only 64% of students who matriculated in four-year institutions of higher education earned bachelor degrees in fewer than six years. Only 63% of community college black freshmen returned for a second year (National Center for Public Policy and Higher Education, 2004). More than one-third of white students earned a four year degree, while only 18% of African Americans and 10% of Hispanics received baccalaureate degrees by the time they were in their late twenties (U.S. Department of Education, National Center for Education Statistics, 2002). In comparison, white students consisted of 15% difference between black students and 23% differences when compared with Hispanic students.

Moreover, when predominantly white institution doors' were open to African American students, there was relatively little thought given or action taken to accommodate their cultural needs (Saddlemire, 1996; Taylor 1989). The tension between cultures escalated as more African American students were admitted into predominantly white institutions, and no real changes were made to the enrollment model. According to Saddlemire, African American students still perceived PWI's as hostile, unsupportive, and unwelcoming. If the current trend continues and African American students continue to enroll in PWI's at greater rates than African Americans at PBI's; Allen (1992) research

suggested that over half of the African American students at PWI's would fail to persist and graduate from college. Researchers have for years gained considerable knowledge about the successes and failures experienced by African American students attending either historically black colleges or traditionally white institutions. Fries and Turner (2002) revealed each institution produced advantages and disadvantages for African American students.

Conversely, African American students who attended PBI's identified development advantages over their counterparts at PWI's (Lang, 1994). Such advantages included being more psychologically adjusted or performing better academically, and they had a better sense of their cultural identity (Allen, 1992). In addition, black students had a sense of belonging to a collegiate family environment as opposed to feeling disconnected from campus, staff, or students. Recently, Corkley (2000) examined the academic self-concept in a sample of 206 African Americans students attending historically black colleges and predominantly white colleges. Results revealed that the best predictor of academic self-concept for students attending black colleges was the quality of student-faculty interactions (Corkley, 2000). In spite of the relationships, PWI's failed to consistently provide African American students with positive relationships, and a supportive environment that values them.

However, in a study of 575 African Americans, Asian, Hispanic and White undergraduates who responded to a questionnaire assessing perceptions and experiences of campus cultural climate, this study revealed significant differences between racial and ethnic groups on multiple dimensions where African Americans reported significantly



more racial-ethnic conflict (Ancis, Sedlacek, & Mohr, 2000). White students revealed limited perceptions of ethnic-racial tensions (Ancis, Sedlacek, & Mohr, 2000).

Another big challenge for African American students was the campus environment. Research on human development suggests that humans develop best in surroundings where they are valued, feel safe, are accepted, and have a societal network (Allen, 1992). African American students especially need faculty-student relationships because it is the relationship that ultimately determined a student's academic success (Kobrak, 1992).

When African American students were compared to their white counterparts, black students did not fare well PWI's (Corkley, 2000). Throughout time, the attrition rate for African American students has been consistently higher at PWI's. Historical research reveals that African American students were five to eight times more likely not to complete college, and on average, experience low grades, lower levels of academic achievement, and poorer psychosocial adjustment (Allen, 1985; Astin, 1982; Fleming, 1981; Pentages & Creedon, 1975). More recently, Aronson, Fried, and Good (2002) found that African American college students tend to obtain lower grades than their White counterparts, even when they enter college with equivalent test scores.

Recent research reveals that when minority students leave college early, they often leave behind the possibilities of attaining high paying and highly skilled jobs (Aronson, Fried, & Good, 2002). Historical research also indicates that leaving college early presented negative implications to further a student's interpersonal and intellectual development (Astin, 1982). Today, these implications are very much evident. Because white students have a higher college graduation rate than African American or Hispanic

students, society is far more likely to see the higher paying skilled jobs being occupied by them.

Meanwhile, the fact that African American student representation on American campuses was low was attributed to either preventing these students from getting to college in the first place or African American students arrived under-prepared and poorly prepared. Prior research has revealed the lack of college attainment is significantly impaired by the fact that African Americans have a higher incarceration rate, a disproportionately higher high school dropout rate, a higher homicide rate, and higher cancer rates in African American men than any other group in the United States (Parham & McDavis, 1987). Prisons have been over-crowded with large numbers of African Americans who make-up 12% of inmates population in their twenties (Harrison & Karberg, 2003).

Studies on the departure process for African Americans in college revealed different reasons why African American students leave college early. As a result, Astin and Cross (1981) developed a descriptive profile of black students enrolled in PBI's as a means of understanding who were more likely to depart. The following year, Astin's (1982) study identified both personal and environmental factors that appeared to have had an impact on the departure process of African American students enrolled at PBI.

Next, Fleming's (1984) study looked at African American students' interactions that contributed to the reasons why some black students remained in college as compared to those who departed. Data were collected from 1,167 African American undergraduate students at 12 four-year HBCU's that participated in the National Survey of Student Engagement. The results illustrated that African American women enjoy an equally

engaging experience as their same-race male counterparts, and students who remained in college did so because they had a sense of connection and unity among black peers (Fleming, 1984). Finally, Nettles (1988) research revealed 76,554 fewer black undergraduates were enrolled in 1985 than in 1976, a decline of 8.9%. The low percentage of African American college graduates was attributed for the most part, to the enrollment drop and the failure of many African Americans once enrolled in an institution of higher learning to remain in college (National Center for Education Statistics, 2006-2007).

The previous research confirmed the theory of many that a major problem in higher education is how to retain African American students beyond their first year to completion. Perhaps some answers can be found in the findings by Pascarella and Terenzini (2005) related to community colleges:

. . . in the aggregate, interaction with peers is probably the most pervasive and powerful force in student persistence and degree completion. The recent research suggests one dynamic at work is students' attraction to other students who are like themselves in various ways, including attitudes and values, and a second powerful influence is students' socialization to peer group norms through progressive conformity, which encourages students to adapt their goals and values to accommodate those of the peer group. (pp. 615-616)

Eight African American women and seven African American men participated in a study at predominantly white institutions, from Georgia to California and back to Maryland. This study revealed positive influences on college persistence that included preparatory experiences, intrapersonal characteristics, motivational variables, college involvement, environmental facilitators, and family support (Levister, 2001).

*Research on the Persistence of Hispanic Students to Continue Beyond the  
First Year of College*

In fall 2002, almost 1.7 million Hispanic students were enrolled in our nation's 4,100 degree-granting colleges and universities (U.S. Department of Education, 2002). The U.S. Department of Education reported among those receiving a regular high school diploma on time, 71% of whites and 66% of Hispanics immediately go on to college. However, there are large disparities in the completion of bachelor's degrees. By age 26, 38% of white high school completers have attained a bachelor's degree, in comparison to 18% of Hispanic high school completers.

Hispanic students have a tendency to pursue undergraduate studies in ways that make it more difficult for them to complete formal degrees and awards. Among Hispanic four-year college students under the age of 25, 86% enroll full-time while 92% of white students attend full-time (U.S. Department of Education, 2002). In addition, among young undergraduates at two-year colleges, 61% of Hispanic and 74% of white students go full-time.

Moreover, Hispanic undergraduates are much more likely to be enrolled in community colleges, and they are more likely to be older students. Among fulltime undergraduates, one-third of Hispanic and one-fifth of white students attend two-year colleges (U.S. Department of Education, 2002).

The U.S. Department of Education (2002) report identified seven undergraduate attributes negatively associated with postsecondary degree attainment among full-time undergraduates. They are: delayed college entry, part-time attendance, and financially-independent status, single parent status, having dependents, not having a regular high school diploma, and working full-time. The average number of risk attributes for

Hispanic undergraduates is 2.4, in comparison to 2.0 for white undergraduates and 2.7 for African American undergraduates (U.S. Department of Education, 2002).

There are a large number of Hispanic undergraduates attending community colleges and many are part-time students. The net tuition paid by Hispanic students tends to be less than that paid by whites and African American students. In 1999-2000, the average tuition, less all grants, was \$2,388 for white, \$1,540 for African American, and \$1,443 for Hispanic undergraduates (U.S. Department of Education, 2002). Therefore, given their lower family incomes, Hispanic undergraduates are more likely to receive federal grants than whites.

In 1999-2000, 19% of white undergraduates received a federal grant, in comparison to 35% of Hispanic and 40% of African American undergraduates (U.S. Department of Education, 2002). Despite attendance at lower-cost institutions and a greater likelihood of receiving financial aid, Hispanic students face a greater burden in meeting college expenses. Forty-one percent of white undergraduates had remaining financial need; whereas 57% of Hispanic and 56% of African American undergraduates had unmet needs after receiving financial aid (U.S. Department of Education, 2002). The burden of not being able to meet financial obligations causes undue stress on Hispanic students and their family.

In order to foster Hispanic students' college persistence, the sense of belonging is important at the postsecondary level. Occasionally, the term critical mass has been used in the field of education to convey "a level of representation that brings comfort or familiarity within the education environment" (Hagedorn, Chi, Cepeda, & McLain, 2007, p. 74). Therefore, when there is not a sufficient number of Hispanic students or faculty

on campus, it sends the message there is a lack of minority role models (Hagedorn et al., 2007), which may lead to the lack of sensitivity and understanding, and foster feelings of isolation (Laden & Hagedorn, 2000). Nevarez (2001) indicated that “reaching proportional racial/ethnic representation” and fostering a sense of belonging and social integration should be a goal for all educational institutions (p. 77). Therefore, institutions should consider revising curriculum and policy with an awareness of Hispanic cultural values, and accommodating minority students through programs and services.

### *Chapter Summary*

This chapter examined various ethnic differences in regards to the persistence of college students. A major focus was given to the history of retention and various retention models. Additionally, factors related to the retention of college students revealed significant importance. This chapter concluded with a discussion of African American and Hispanic research on student persistence beyond the first year of college.

The purpose of this study: (1) to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities. To carry out the purpose of this study, 12 research questions were asked about gender, ethnicity and various types of universities.

The next chapter is composed of the research methodology that was used to address the problem delineated in Chapter One. Chapter Three provides a brief introduction followed by the research questions. Next, the researcher explains the research design for this study. The survey population of students precedes the description

of universities and instrumentation. Procedures for collection of data, procedures for data analysis, and sample validity were explained in this chapter. The next chapter concluded with a brief summary.

## CHAPTER THREE

### Research Methodology

For many years, the success of all students in higher education has been crucial if Americans are to compete in a global economy (U.S Department of Education, 2009). Professional positions have become more competitive and college degrees even more essential for all to compete equally on the world scene. Consequently, college student retention is a major focus for many colleges and universities, and the retention rate among minority students is of particular concern.

This chapter explains the methodological procedures used to address the research questions delineated in Chapter 1. That is, although white students still disproportionately outnumber minority students who enroll in colleges and universities, the gap is narrowing. Although, minority students still tend to not persist in college until degree completion in the same proportions as white students (Renner, 2003). This problem is the focus of the study.

The purpose of this study is to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and to examine retention differences by gender, ethnicity, and types of universities. To carry out this study, the researcher examined factors related to why students persist beyond their freshmen year by gender, ethnicity and various types of universities. Permission for the researcher to use the Institutional Integration Scale Survey (1980) to conduct field research was granted by Dr. Pascarella and Dr. Terenzini (Appendix A). The researcher also gained approval from



the IRB at each of the six universities to use this survey to compare college students by gender, ethnicity, and various colleges. The specific concern is: why do minority students still tend to not persist in college, until degree completion, in the same proportions, as white students (Renner, 2003)? Determining why college students persist beyond their freshmen year will shed light on how universities can increase the minority persistence.

### *Research Questions*

1. Is there a difference in social integration scale factors by gender between students who continue beyond their freshmen year?

To determine that there were no differences in social integration scale factors by gender, three *ANOVAs* were conducted on social integration scale factors by gender.

2. Is there a difference in academic integration scale factors by gender between students who continue beyond their freshmen year?

To determine that there were no differences in academic integration scale factors by gender, two *ANOVAs* were conducted on academic integration scale factors by gender.

3. Is there a difference in social integration scale factors by ethnicity between students who continue beyond their freshmen year?

To determine that there were no differences in social integration scale factors by ethnicity, three *ANOVAs* were conducted on social integration scale factors by ethnicity.

4. Is there a difference in academic integration scale factors by ethnicity between students who continue beyond their freshmen year?

To determine that there were no differences in academic integration scale factors by ethnicity, two *ANOVAs* were conducted on academic integration scale factors by ethnicity.

5. Is there a difference in social integration scale factors between students who continue beyond their freshmen year in public predominantly white institutions and public predominantly black institutions?

To determine that there were no differences in social integration scale factors by public university students (PWI vs. PBI) three *ANOVAs* were conducted on social integration scale factors by public university students.

6. Is there a difference in academic integration scale factors between students who continue beyond their freshmen year in public predominantly white institutions and public predominantly black institutions?

To determine that there were no differences in academic integration scale factors by public university students (PWI vs. PBI) two *ANOVAs* were conducted on academic integration scale factors by public university students.

7. Is there a difference in social integration scale factors between students who continue beyond their freshmen year in private predominantly white institutions and private predominantly black institutions?

To determine that there were no differences in social integration scale factors by private university students (PWI vs. PBI) three *ANOVAs* were conducted on social integration scale factors by private university students.

8. Is there a difference in academic integration scale factors by between students who continue beyond their freshmen year in private predominantly white institutions and private predominantly black institutions?

To determine that there were no differences in academic integration scale factors by private university students (PWI vs. PBI) two *ANOVAs* were conducted on academic integration scale factors by private university students.

9. Is there a difference in social integration scale factors between students who continue beyond their freshmen year in public predominantly white institutions and private predominantly black institutions?

To determine that there were no differences in social integration scale factors by university students (Public PWI vs. Private PBI), three *ANOVAs* were conducted on social integration scale factors by university students (Public PWI vs. Private PBI).

10. Is there a difference in academic integration scale factors between students who continue beyond their freshmen year in public predominantly white institutions and private predominantly black institutions?

To determine that there were no differences in academic integration scale factors by university students (Public PWI vs. Private PBI), two *ANOVAs* were conducted on academic integration scale factors by university students (Public PWI vs. Private PBI).

11. Is there a difference in social integration scale factors between students who continue beyond their freshmen year in private predominantly white institutions and public predominantly black institutions?

To determine that there were no differences in social integration scale factors by university students (Private PWI vs. Public PBI), three *ANOVAs* were conducted on social integration scale factors by university students (Private PWI vs. Public PBI).

12. Is there a difference in academic integration scale factors between students who continue beyond their freshmen year in private predominantly white institutions and public predominantly black institutions?

To determine that there were no differences in academic integration scale factors by university students (Private PWI vs. Public PBI), two *ANOVAs* were conducted on academic integration scale factors by university students (Private PWI vs. Public PBI).

### *Research Design*

This study utilized descriptive ex-post facto methods to examine the differences in retention rate among white, African American and Hispanic college students at various colleges and universities. Furthermore, these methods were used to explore the reasons why minority students remained in college beyond their freshmen year. This research methodology is useful when trying to evaluate an educational program or its participants in the most effective way (Diem, 1999).

The study used a Institutional Integration Scale Survey to determine whether gender, ethnicity, or various colleges influenced persistence among white, African American, and Hispanic students from predominantly white institutions and predominantly black institutions to persist in college beyond their freshmen year. A selection of sophomore, junior, and senior college students responded to a questionnaire designed by Pascarella and Terenzini (1980) called Institutional Integration Scale Survey (Appendix B). It was used to conduct the field research and adapted from Tinto's (1975,

1987, 1993) model on college students' persistence. Additionally, the researcher used Drs. Pascarella and Terenzini's model as the primary theoretical framework lens for analyzing and interpreting of data.

The independent variables were grouped in two categories: Academic and Social Integration. Social Integration consisted of Scales 1, 2, and 3 factors. Academic Integration consisted of Scales 4 and 5 factors. Additionally, the Pre-college characteristics (PCC), such as Gender (G), Race (R), SAT, High School GPA (HSGPA), Parental Income (PI), Mom and Dad formal Education (MDFE), Classification (C), Expected No. of Informal Contacts with Faculty (ENICF), No. of High School Extracurricular Activities (NHSEA), Initial Program Enrollment (IPE), Students Highest Expected Academic Degree (SHEAD), College Choice (CC), Right Decision to Attend this College (RDAC), and Importance of Graduating from College (IGFC), were measured in this study.

The pre-college characteristics were coded according to the categories mentioned above. Adapted by Pascarella and Terenzini from Tinto's (1975, 1987) theory model on college attrition, the instrument consisted of pre-college characteristics and five scales. Specifically, this instrument involved students' pre-characteristics, social and academic factors. Social integration consisted of scales 1-3 and questions 15 through 31. The title of scale 1 was peer group interaction. Interaction with faculty was the title of scale 2, and scale 3 was the title of faculty concern for student development and teaching. Scales 4 and 5 were identified as academic integration with questions 32 through 44. Additionally, scale 4 was academic and intellectual development and scale 5 was

institutional and goal commitment. There were a total of 44 questions on the Institutional integration scale survey.

Tinto's (1975, 1987, 1993) conceptual model theorized a student's persistence in college was a result of social and academic integration. Academic Integration was coded (AI) and Social Integration coded (SI). The findings from this study on sophomore, junior, and senior college students supported a reasonable assessment and predictability of the Institutional Integration Scale questionnaire on college students' retention from one college level to the next.

Using a instrument that employed several Likert-Type Scales measuring from "1 to 5," students were asked to respond to a survey questionnaire relative to the study rating their viewpoints. The responses strongly agree were assessed (5 pts.), agree (4 pts.), neither agrees nor disagrees (3 pts.), disagree (2 pts.), and strongly disagree (1 pt.).

Next, five college students were stratified randomly selected from the original group of surveyed students to participate in an interview follow-up (Appendix C). All of the interviews were recorded, transcribed, and checked against the original recording to ensure accuracy. The field notes were recorded immediately after each interview to record the observations of the interviewer while collecting data. The information was kept in strict confidentiality according the Committee for Protection of Human Subjects in Research and the Baylor University Institutional Review Board (IRB).

### *Population*

The population in this study consisted of 954 college (sophomore, junior, and senior) students who attended the university as freshmen students. The population had a wide range of economic and social backgrounds. No freshman students were used in this

study. One hundred fifty-nine college students were stratified randomly selected from 200 surveys gathered from each of the following six universities: Texas State University, Sam Houston State University, Mary Hardin Baylor University, Prairie View A & M University, Texas Southern University, and Huston-Tillotson University to participate in the study. Fifty-three white, 53 African American, and 53 Hispanic students from each institution participated in the study. For this study, a total of 159 students or approximately 53 participants per group were studied by gender, ethnicity, and various colleges, and used as the sample population. The ethnicity totals consisted of 318 white, 318 African American, and 318 Hispanic college students.

For this study, all of the six universities were assigned a letter code: Texas State (TS), Sam Houston State (SHSU), Prairie View A & M (PVAM), Texas Southern University (TSU), University of Mary Hardin Baylor (UMHB), and Huston-Tillotson (HTU). Sophomore, junior and senior college students (SJSCS) retention factors (Social and Academic Integration) were measured by a survey and interview process. SJSCS served as the control group of participants or the dependent variables. Nine hundred and fifty-four white, black, and Hispanic college students from various institutions were stratified randomly selected to participate in the study, with exactly half of the participants being male (477) and half female (477).

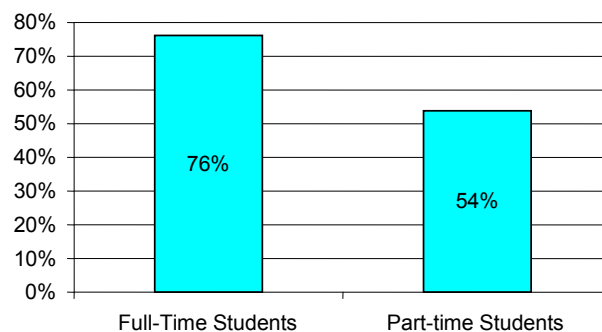
### *Description of Universities*

In this study, three universities were identified as predominantly white institutions (Texas State University, Sam Houston State University, and Mary Hardin Baylor University), and three that were identified as predominantly black and are historically black universities (Prairie View A & M University, Texas Southern University, and

Huston-Tillotson University). Four of the six institutions were state funded (Texas State University, Sam Houston State University, Prairie View A & M University, and Texas Southern University,) and two were private (Mary Hardin Baylor University and Huston-Tillotson University).

Texas State University is located in San Marcos, Texas with a growing community of nearly 50,000 people of diversity. The main campus is located halfway between Austin and San Antonio, Texas. Texas State is ranked among the top 20 universities in the nation in the number of degrees granted to Hispanic undergraduates.

Texas State University had a total student population of 27,129 in 2008. More than 70.2% (19,070) were white, while 4.7% (1279) were African American, and 19.8% (5396) were Hispanic students. The total minority representation at the university was 30 percent. Additionally, the university reported 76% of freshmen return for the sophomore year as shown in (Figure 4). Male to female ratio was 55% female and 45% male.



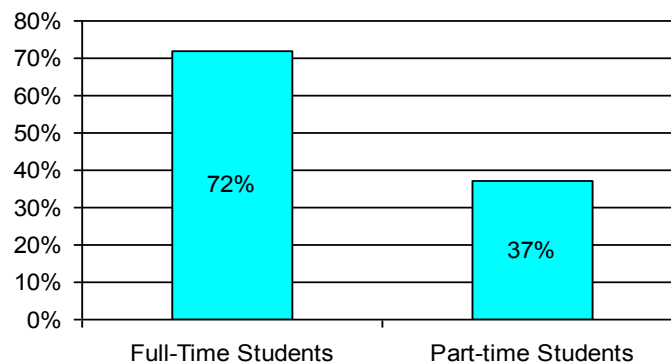
*Figure 4.* First time student Retention measured by percentages of students who return in the fall

Sam Houston State University (SHSU) is located in Huntsville, Texas just 70 miles from downtown Houston. The city has 34,500 residents and is located between



Houston and Dallas. Sam Houston State University has a diverse student body with students from 53 countries. SHSU student body has become more diversified during the last decade than ever before with a growing African-American, Hispanic, and Native American student population.

In 2008, SHSU had a total student population of 15,959. More than 52.4% (8,306) of the total population were white, 11.1% (1,779) were African American, and 8.4% (1,342) were Hispanic. The university reported a total student retention rate of 72% as shown in (Figure 5).



*Figure 5.* First time student retention measured by percentages of students who return in the fall

The University of Mary Hardin Baylor (UMHB) is located in Belton, Texas (a small resident community). UMHB is affiliated with the Baptist General Convocation of Texas and prepares students for leadership, service, and faith-informed sensitivity. This institution is distinguished for its Christian-centered learning community, academic excellence, personal attention, broad-based scholarship, and a commitment to the Baptist vision for education.

In 2008, the university had a total student population of 2,735. Sixty-two percent (1,706) of the total population were white, 8.04% (219) were African American, and 10% (273) were Hispanic. The institution reported that 65% of freshmen returned for sophomore year. This was an increase of 7% from the previous year.

Huston-Tillotson University (HTU) is a private institution located in Austin, Texas. The city has a population of 656,562 residents. HTU is distinguished as Austin's oldest postsecondary educational institution. More than 2/3 of the student population is African American.

In 2008, Huston-Tillotson College had a total student enrollment of 706. Sixty-nine percent (487) of the total population were African American, 12.6% (89) were white, and 18.4% (130) were Hispanic. The institution reported 52% of their freshmen students returned for their sophomore year.

Prairie View A & M is located in Prairie View, Texas, a rural town 50 miles northwest of Houston. The university was founded in 1876 and is the second oldest public institution of higher education in the state of Texas. The institution is a member of the Texas A & M University system, and thus prides itself on being dedicated to fulfilling the land-grant mission of achieving excellence in teaching, research, and service. Prairie View A & M is a historically Black university.

In 2008, Prairie View A & M University had a total student population of 7,912. Ninety percent (7,120) of the total population were African American, 5% (395) were white, and 3.1% (245) were Hispanic. The university reported 71% of freshmen students return for sophomore year.

Texas Southern University, located near the heart of downtown Houston, was founded in 1947 as a public, co-educational, historically black university. Originally, TSU was called Texas State University for Negroes to serve African Americans in Texas. The name was changed to Texas Southern University in 1955.

In 2008, Texas Southern University had a total student population of 11,903. More than 85.3% (10, 153) of the total population were African American, 2.4% (285) were White, and 4.5% (535) were Hispanic. The university reported 58% of freshmen return for sophomore year.

### *Instrumentation*

The researcher used the Institutional Integration Scale Survey designed by Dr. Pascarella and Dr. Terenzini (1980). This instrument had five scales. Scale 1 is identified as peer-group interactions and has seven questions. Scale 2 is identified as interactions with faculty and has five questions. Scale 3 is identified as faculty concern for student development and teaching, and has five questions. Scale 4 is identified as academic and intellectual development and has seven questions, and Scale 5 is identified as institutional and goal commitments, and has six questions.

Dr. Pascarella and Dr. Terenzini (1980) used this survey instrument in earlier studies to identify factors which influenced students' persistence in college. The five scales survey instrument was adapted from Tinto's (1975, 1987, 1993) models. It has been used to conduct research study on student persistence factors for decades. The instrument was constructed with 44 items of variables. Questions related to the instrument are located in Appendix B.

Historically, this instrument has been verified for its predictive validity and reliability by Pascarella and Terenzini (1980) using principle component factor analysis, multivariate analysis of covariance, and discriminate analysis. Terenzini, Lorang, and Pascarella (1981) also validated the reliability of this instrument on student's retention. Then, Fox (1984) further validated the reliability of the instrument in his work on the reliability and discriminate validity of institutional integration scale for disadvantaged college students. The reliability of the instrument was also based on Pascarella and Terenzini's (1990) Institutional Integration Scales.

Over the years, this instrument has been used to measure the various integration scales identified by Pascarella and Terenzini as corresponding to the likelihood of college persistence. This scale survey has been found to generally support the major dimensions of Tinto's (1993) theory of student integration. The extent of academic integration was determined primarily by the student's academic performance and the level of intellectual development.

In contrast, social integration was primarily a function of the quality of peer-group interactions and the quality of student interactions with faculty. Furthermore, this integration placed interactions with faculty in the domain of social integration. Tinto suggested that such interactions may influence academic integration. Moreover, the two levels, Social and Academic Integration, lead to an additional component which has been termed commitment. This component called commitment refers to the institution, and its goals associated with graduation. In fact, when the level of institutional and goal commitment was high and there was a corresponding increase in the likelihood of a student persist in college until degree completion (Braxton & Lien, 2000).

### *Procedures for Collection of Data*

The first step in collecting data was gaining approval to use Institutional Integrated Scale Survey which was obtained from Ernest Pascarella and Patrick Terenzini to conduct the field research of this study (Appendix A). Next, the researcher contacted the academic affairs office on six college campuses to obtain written approval to survey students and gather data pertaining to the study. Then the researcher traveled to each of the six universities to conduct the study in the spring of 2009. The surveys were disseminated at the university campuses in the following sequence: Texas State University, The University of Mary Hardin Baylor, Huston-Tillotson University, Prairie View A & M, Texas Southern University, and Sam Houston State University.

Prior to distributing surveys to participants, the researcher disseminated survey guidelines to college students. The researcher explained that only sophomore, junior, and senior students who had been enrolled at their university as freshmen could participate in the study. Additionally, students were told if they were unsure regarding an answer to any question to just leave it blank. *This study did not use any data from surveys that were not completely answered.* Furthermore, surveys were administered identically to each student group and under similar conditions.

To select 954 college students for this study, the researcher used a stratified random selection process from 1200 surveys. First, surveys were grouped by campus. Second, within each campus, the surveys were grouped by ethnicity. Third, the researcher grouped by gender within each race after grouping by ethnicity. Fourth, each survey was then numbered from 1-200 and the numbers were placed in a container for drawing. Next, 53 student numbers were pulled from a container and identified as white.

Then, 53 more numbers were pulled labeled as African American students followed by 53 additional numbers being pulled that were labeled Hispanic. Each participant's number had an equal chance of being selected and the process was the same at each of the six universities. Finally, selected students' numbers were matched with survey data that were collected using self-report data only. After data were collected, they were entered in SPSS to calculate results.

Students in this study were identified in undergraduate educational classrooms and as students walked from class to class in the commons areas. At each university, a similar approach was used. Only sophomore, junior, and senior college students were provided a packet containing the Institutional Integration Scale with instructions. All students were given instructions on how to fill in the survey information.

After the completion of the survey, the participants were given a token of appreciation, (Barnes & Noble discount book card) and the packets were collected by the researcher and tabulated using SPSS. The Institutional Integration Scale Survey used to conduct the study is located in Appendix B. The participants used in the study were 53 white, 53 African American, and 53 Hispanic college students, a total of 159 participants at each of the six college campuses that make-up the optimal number for this study of 954. The participants in this study were measured by gender, ethnicity, and various college students' perceptions using an Institutional Integration Scale Survey. No attempts were made to select an equal number of sophomore, junior, or senior college students to determine perception differences by the integration scale survey.

After participants completed their surveys, the interview process occurred. Five students from each campus were interviewed using a stratified random sample. Similar

to the survey process, each student was assigned a number and the number was placed in a container for drawing. The surveys were grouped by campus, ethnicity, and gender. Three of the student numbers were male students and two were female students of various ethnicities. Interview participants in the study consisted of one white, two African American, and two Hispanic students from each campus. Of the 30 participants, six were white, 12 were African American, and 12 were Hispanic students. Furthermore, 18 of the interviewees were male and 12 were female.

The goal was to identify and explore additional information relative to persistence factors of college students beyond their first year at the predominantly white and predominantly black institutions using the follow-up questionnaire located in Appendix C. A detailed explanation was attached to the instrument, and a total of 30 students were interviewed. After the data were collected, a confirmatory factor analysis was performed to determine findings of the data. The researcher consolidated data that were mentioned three or more times.

### *Procedures for Data Analysis*

#### *ANOVA*

Analysis of Variance (*ANOVA*) is an appropriate statistical analysis when the purpose of research is to assess if mean differences exist on one continuous dependent variable between two or more discrete groups (independent variables). The *ANOVA* uses the *F*-test, “. . . which is the ratio of two independent variance estimates of the same population variance” (Pagano, 2006, p. 329). The *F*-test allows researchers to make the overall comparison on whether group means differ. If the obtained *F* statistic is larger

than the critical  $F$  statistics, the null hypothesis is rejected. Additionally, Tukey's Test was used to compare the means that were significantly different. Tukey's Test was used to compare means differences of each variable identified that was significantly different when standard error was greater than what would be expected. The validity of such data analysis is detailed next.

### *Sample Validity*

It was first important to establish a sample size necessary for the statistical analysis a priori, while considering the power, population effect size, and level of significance. As Cohen (1992) wrote,

Statistical power analysis exploits the relationships among the four variables involved in statistical inference: sample size ( $N$ ), significance criterion ( $\alpha$ ), population effect size ( $ES$ ), and statistical power. For any statistical model, these relationships are such that each is a function of the other three. For example, in power reviews, for any given statistical test, we can determine power for given  $\alpha$ ,  $N$ , and  $ES$ . For research planning, however, it is most useful to determine the  $N$  necessary to have a specified power for given  $\alpha$  and  $ES$ . . . . (p. 155)

Since sample size requirements, for an analysis of variance (*ANOVA*) with three groups, were determined for the purposes of this study, it was also necessary to determine an acceptable significance level for determining when to reject the null hypothesis (i.e., the probability of committing a Type I error). The standard values for significance level represented by  $\alpha$  are set at 10%, 5%, and 1% as a matter of policy (Aczel & Sounderpandian, 2005). This means that an  $\alpha = 0.05$  corresponds to  $(1 - \alpha) = 0.95$  probability of a correct statistical conclusion when the null hypothesis is true (Lipsey, 1990). Additionally, a 0.95 probability is equivalent to a 95% confidence level to reject  $H_0$  (Aczel & Sounderpandian). For the purposes of this research, the level ( $\alpha = 0.05$ )



was chosen for the analysis, which was the most commonly designated value in social science research for this parameter (Lipsey, 1990).

Statistical power was also an important factor to consider a priori. As defined by Cohen (1992),

The statistical power of a significance test is the long-term probability, given the population ES,  $\alpha$ , and TV of rejecting. When the ES was not equal to zero,  $H_0$  was false, so failure to reject it also incurs an error which was a Type II error. (p. 98)

Power was the probability of rejecting the null hypothesis if the null hypothesis was really false. An acceptable level of power for this study is 0.80, making the Type II error 4 times as likely as the Type I error. Since it was typically more serious to make a false positive claim than it was to make a false negative one, this was an acceptable level and was considered in determination of the sample size a priori (Cohen, 1992).

According to Cohen (1992),  $f$  effect sizes were small if they are 0.10, medium if they were 0.25 and large if they were 0.40. In choosing an effect size, the researcher in essence decided how small of a difference was he willing to accept and still find the results worthwhile. If allowing a very small effect size, then a large sample was required. If requiring large differences, then a small sample size was required. The larger the effect size, the greater the power of the test. A medium effect size had been determined as appropriate for this study and used in the determination of the sample size. This was considered an average effect and appropriate for this analysis.

Considering this medium effect size of 0.25, a generally accepted power of 0.80, and a 0.05 level of significance, the necessary sample size to achieve empirical validity for this study is 159 or approximately 53 participants per group for *ANOVAs* by gender, ethnicity, and various colleges.

### *Chapter Summary*

Chapter Three contains a brief introduction of the methodology followed by 12 research questions. The research design used descriptive ex-post facto methods to examine the persistence differences among white African American and Hispanic college students at various universities. Additionally, the population examined in this study consisted of 954 college (sophomore, junior and senior) students selected from a stratified random sample of 1200.

Next, the descriptions of three universities were identified as predominantly white institutions and three were identified predominantly black institutions. The instrumentation used for this study was designed by Dr. Pascarella and Dr. Terenzini. This instrument had five scales of measurement with a total of 44 items of variables.

The first procedural step for collection of data was getting approval to use the Institutional Integrated Scale Survey from Ernest Pascarella and Patrick Terenzini. Followed by getting written approval from each institution to survey students and gather data pertaining to the study. Finally, after the collection of data, the procedures for data analysis and sample validity was used to establish the size necessary for statistical analysis.

The purpose of this study: (1) to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities. To carry out the purpose of this study, 12 research questions were asked about gender, ethnicity and various types of universities.

Chapter Four is composed of the findings for each of the 12 research questions mentioned throughout the chapters. The next chapter also provided a brief introduction followed by the demographic data. Next, the researcher revealed the findings for each research question with a description and table. The interview results precede the summary of findings which concludes the chapter.

## CHAPTER FOUR

### Findings

Chapter Four describes the population, data collection instrument, procedures for collection of data, number of participants, gender, and the students' ethnicity relative to the study. The purposes of the study were: (a) to examine differences between students (White, African American, and Hispanic) who persist beyond their freshmen year using social and academic integration scale factors; and (b) to examine retention differences by gender, ethnicity, and types of universities to determine what factors influence minority student persistence.

The study was significant because it examined research for reasons why minority college enrollment was under-represented. First, the number of minority undergraduate students' in college has been smaller for decades when compared to white students. Furthermore, the study examined reasons for extreme differences between colleges, and universities in regards to college enrollment for minority students. Second, African American students were more than twice as likely to dropout of college as white students. Therefore, the study was important because it explored why African American males have the worst attrition rate among both sexes and all racial/ethnic groups. Third, although the minority persistence has improved, black students' persistence at institutions of higher education still continued to be an important issue. African American and Hispanic students' persistence warranted study because universities base funding on minority representation (Mckeown, 2000). Finally, the study explained why these students persist beyond their freshman year.

Research revealed Hispanics were the fastest growing population in the United States and the largest minority population (U.S. Census Bureau, 2007). As college enrollment of Hispanic students increased, the acknowledgement of the Hispanic students' dropout rate when compared to white students cannot be ignored. Therefore, the study was important because it provided answers as to why Hispanic students were not equally represented at the university level as white students. Because Hispanic students' dropout rate was higher when compared to white students, the economic statuses of these students' were lower than white students. In addition, the differences in dropout rate created economic disadvantages for Hispanics and revealed important implications on society and the Hispanic communities. Hence, the study examined factors that increased persistence, and was therefore, significant to all stakeholders who wish to establish equal opportunities for two minority college groups.

Additionally, public and private universities stand to increase their knowledge base of how to increase minority college persistence from this research. Consequently, the study was significant because it revealed the reasons for the differences between universities and various ethnic groups. Finally, the study was important because each phenomenon warranted an investigation to find ways to improve the number of students retained beyond their freshmen year. Additionally, the researcher used Drs. Pascarella and Terenzini's model as the primary theoretical framework lens for analyzing and interpreting of data.

Pre-college characteristics' percentage and frequency were presented in tables. The results were self-reported. In addition, an investigation of research questions and

demographic data were revealed in the chapter followed by results of college student interviews, and a summary of findings.

### *Demographic Data*

Question 1 asked the participants their gender. Nine hundred fifty-four college students on six different campuses in Texas participated in the survey; 477 (50%) were male and 477 (50%) were female. There were a total of 159 students on each campus in the study. Frequencies and percentages for college participants attended are presented in (Table 1).

Table 1

#### *Frequencies and Percentages for College*

College	Frequency	Percentage
Texas State University	159	16.7
University of Mary Hardin Baylor	159	16.7
Huston Tillotson College	159	16.7
Prairie View A&M University	159	16.7
Texas Southern University	159	16.7
Sam Houston State University	159	16.7

Question 2 asked the participants their ethnic origin. Three hundred and eighteen (33.3%) of the total participants were African American, 318 (33.3%) were Caucasian and 318 (33.3%) were Hispanic (Table 2).

Table 2

*Frequencies and Percentages for Ethnicity*

Ethnicity	Frequency	Percentage
African American	318	33.3
Caucasian	318	33.3
Hispanic	318	33.3

Question 3 asked the participants their SAT scores. Six hundred and thirty-six (66.7%) participants were from a public institution and 318 (33.3%) were from a private school. The ranges of SAT scores are presented by institutions in Table 3. The percentage results revealed majority of participants 508 (53.4%) scored between “1199 – 900.” SAT scores were self-reported.

Table 3

*Frequencies and Percentages Totals for Range of SAT Scores by Institution*

Institution	1600 to 1200		1199 to 900		899 to 500	
	N	%	N	%	N	%
*HTU	33	20.8	81	50.9	45	28.3
PVAM	12	7.5	61	38.4	86	54.1
SHSU	37	23.3	95	59.7	27	17.0
TSU	29	18.2	75	47.2	55	34.6
*UMHB	40	25.2	101	63.5	18	11.3
Texas State	37	23.3	95	59.7	27	17.0

*Note:* \*Indicates Private Institutions

Question 4 asked the participants their high school GPA. Frequencies and percentage totals for HS GPA scores by institutions are presented in Table 4. The majority of participants' (55.6%) had GPA scores between 3.0 and a 3.9 and was in the top 25 percentile. GPA scores were self-reported.

Question 5 asked the participants their parents' income. The majority (36.8%) of participants' had parental incomes that were between \$30,001 and \$60,000 dollars annually. Frequencies and percentage totals for parental income by institutions are presented in Table 5. Data were self-reported.

Table 4  
*Frequencies and Percentages Total for Range of GPA by Institutions*

Institution	4.0 or More		3.9 to 3.0		2.9 to 2.0		1.9 or Less	
	N	%	N	%	N	%	N	%
*HTU	12	7.6	91	57.6	48	30.1	8	5.1
PVAM	4	2.5	66	41.5	81	50.9	8	5.0
SHSU	19	11.9	114	71.7	26	16.4	0	0.0
TSU	0	0.0	54	34.0	85	53.5	20	12.6
*UMHB	16	10.1	108	67.9	34	21.4	1	0.6
Texas State	38	23.9	97	61.0	20	12.6	4	2.5

*Note:* \*Indicates Private Institutions

Question 6 asked the participants their parents' education level. Frequencies and percentages for parental education are summarized in Table 6. The majority (35.6%) of participants' parents had a high school education.



Table 5

*Parental Income*

Institution	Less than \$30,000		\$30,001 to \$60,000		\$60,001 to \$90,000		\$90,001 to \$120,000		\$120,001 to \$150,000		More than \$150,000	
	N	%	N	%	N	%	N	%	N	%	N	%
*HTU	56	35.2	66	41.8	29	18.4	7	4.4	1	0.6	0	0.0
PVAM	47	29.6	80	50.3	25	15.7	7	4.4	0	0.0	0	0.0
SHSU	24	15.1	52	32.7	39	24.5	27	17.0	12	7.5	5	3.1
TSU	47	29.6	51	32.1	42	26.4	9	5.7	6	3.8	4	2.5
*UMHB	29	18.2	52	32.7	32	20.1	23	14.5	16	10.1	7	4.4
Texas State	23	14.5	50	31.4	40	25.2	27	17.0	7	4.4	12	7.5

\*Indicates Private Institutions

Table 6

*Frequencies and Percentages for Parental Education by Institutions*

Institution	1 <sup>st</sup> -5 <sup>th</sup>		6 <sup>th</sup> -8 <sup>th</sup>		9 <sup>th</sup> -12 <sup>th</sup>		High School		Comm. College		Bachelors		Advanced	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
*HTU	3	1.9	8	5.0	10	6.3	79	50.0	31	19.6	21	13.3	7	4.4
PVAM	3	1.9	8	5.0	30	18.9	49	30.8	38	23.9	19	11.9	12	7.5
SHSU	2	1.3	4	2.5	21	13.2	45	28.3	34	21.4	38	23.9	15	9.4
TSU	0	0.0	9	5.7	8	5.0	63	39.6	39	24.5	33	20.8	7	4.4
*UMHB	4	2.5	5	3.1	14	8.8	47	29.6	39	24.5	34	21.4	16	10.1
Texas State	2	1.3	6	3.8	14	8.8	56	35.2	36	22.6	32	20.1	13	8.2

\*Indicates Private Institutions

Question 8 asked the participants the number of informal contacts with faculty. Frequencies and percentages for expected number of informal contacts with faculty per month are presented in Table 7. The majority of participants (59.9%) expected between one to five contacts per month outside of class.

Question 9 asked the participants the number of extra-curricular activities they participated in during high school. Frequencies and percentages number of high school extra-curricular activities is summarized in Table 8. The majority (47.2%) of participants were involved in 3 to 4 activities.

Table 7

*Frequencies and Percentages Total for Expected Number of Informal Contacts with Faculty*

Contacts	Frequency	Percentage
Sixteen or More	41	4.3
Eleven to Fifteen	118	12.4
Six to Ten	222	23.4
One to Five	569	59.9

Table 8

*Frequencies and Percentages Total for Number of Extracurricular Activities*

Extracurricular Activities	Frequency	Percentage
One or Two	297	31.2
Three or Four	450	47.2
Five or Six	163	17.1
Seven or More	43	4.5

Question 11 asked the participants their expected highest level of education. Frequencies and percentages for expected highest level of education is summarized. As shown in Table 9, more than one-half (50.8%) of participants stated their intention to complete a Masters degree.

Table 9  
*Frequencies and Percentages for Expected Highest Level of Education*

Level of Education	Frequency	Percentage
Bachelors	284	29.8
Masters	484	50.8
Ph.D	148	15.5
Ed. D	15	1.6
M.D.	14	1.5
J.D.	9	0.8

Question 12 asked the participants their college selection choice. Forty-three point eight percent of participants answered that their institution was their first choice. The frequencies and percentages for college choice are presented in Table 10.

Question 13 asked the participants attending this university was their selection a right decision. Frequencies and percentages importance of attending selected university are presented in (Table 11). Over one-half (53.6) of participants stated that their decision to enroll at current university was the right decision.

Table 10

*Frequencies and Percentages for Choice of Attending College*

Choice	Frequency	Percentage
First	417	43.8
Second	319	33.5
Third	146	15.3
Fourth	71	7.5

Question 14 asked participants the importance of graduating. Ninety-two percent of participants stated graduating from college was very important. Results are also presented in Table 11.

Table 11

*Frequencies and Percentages on Level of Importance for Right Decision and Graduation*

Level of Importance	Right Decision		Graduation	
	Frequency	Percentage	Frequency	Percentage
Very Important	510	53.6	872	92.0
Important	309	32.5	68	7.2
Moderately Important	124	13.0	4	0.4
Unimportant	9	0.9	4	0.4

*Findings by Research Questions*

To explain the findings, the researcher denotes that there are five scales and each scale has a group of questions. Scale 1 is identified with questions about peer group interaction. Scale 2 is identified with questions about interactions with faculty. Scale 3

is identified with questions about faculty concern for student development and teaching. Scale 4 is identified with questions about academic and intellectual development, and Scale 5 is identified with questions about institutional and goal commitment. The first three scales are identified as social integration factors, and the last two are identified as academic integration factors.

To further clarify findings, questions 1, 3, 5, 7, 9, and 11 were measured using scales 1-3. Questions 2, 4, 6, 8, 10, and 12 were measured using scales 4 and 5. Each of the odd numbers were listed three times; one for each social integration factor. Even numbers were listed two times; one for each academic integration factor. Finally, to answer twelve research questions, the first three scales measured social criterion. The last two measured academic criterion. Therefore, the research questions were numbered as follows: (1-1-1, 2-2) (3-3-3, 4-4) (5-5-5, 6-6) (7-7-7, 8-8) (9-9-9, 10-10) (11-11-11, 12-12). This numbering system provided an explanation for the duplication of numbers.

1. Is there a difference in social integration scale factors by gender between students who persist beyond their freshmen year?

To examine research question 1 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there were differences on peer group interaction by gender (male vs. female). The results of the ANOVA were not significant,  $F(1, 951) = 0.77, p = .382$  indicating that no differences exist on peer group interaction by gender. Results of the ANOVA are summarized in Table 12.

Table 12

*ANOVA on Peer Group Interaction by Gender*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	Male		Female	
						M	SD	M	SD
Gender	1	0.77	.382	.001	.141	3.51	0.50	3.54	0.48
Error	951	(0.24)							

1. Is there a difference in social integration scale factors by gender between students who persist beyond their freshmen year?

To examine research question 1 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction by gender (male vs. female). The results of the ANOVA were not significant,  $F(1, 951) = 0.43$ ,  $p = .513$  indicating no differences exist on faculty interaction by gender. Results of the ANOVA are summarized in Table 13.

Table 13

*ANOVA on Faculty Interaction by Gender*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	Male		Female	
						M	SD	M	SD
Gender	1	0.43	.513	.001	.100	3.70	0.72	3.73	0.72
Error	951	(0.52)							

1. Is there a difference in social integration scale factors by gender between students who persist beyond their freshmen year?

To examine research question 1 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern by gender (male vs. female). The results of the ANOVA were not significant,  $F(1, 951) = 1.54, p = .214$  indicating that no differences exist on faculty concern by gender. Results of the ANOVA are summarized in Table 14.

Table 14  
*ANOVA on Faculty Concern by Gender*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	Male		Female	
						M	SD	M	SD
Gender	1	1.54	.214	.002	.237	3.05	1.07	3.14	1.08
Error	951	(1.15)							

2. Is there a difference in academic integration scale factors by gender between students who persist beyond their freshmen year? To examine research question 2 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development by gender (male vs. female). The results of the ANOVA were not significant,  $F(1, 951) = 1.48, p = .224$  indicating that no differences exist on academic/intellectual development by gender. Results of the ANOVA are summarized in Table 15.

2. Is there a difference in academic integration scale factors by gender between students who persist beyond their freshmen year?

To examine research question 2 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there were differences on

institutional/goal commitment by gender (male vs. female). The results of the ANOVA were not significant,  $F(1, 951) = 2.11, p = .147$  indicating that no differences exist on institutional/goal commitment by gender. Results of the ANOVA are summarized in Table 16.

Table 15

*ANOVA on Academic/Intellectual Development by Gender*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	Male		Female	
						M	SD	M	SD
Gender	1	1.48	.224	.002	.229	3.77	0.58	3.81	0.58
Error	951	(0.34)							

Table 16

*ANOVA on Institutional/Goal Commitment by Gender*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	Male		Female	
						M	SD	M	SD
Gender	1	2.11	.147	.002	.306	3.01	0.49	3.06	0.51
Error	951	(0.25)							

3. Is there a difference in social integration scale factors by ethnicity between students who persist beyond their freshmen year?

To examine research question 3 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there were differences on peer group



interaction by ethnicity (African American vs. Caucasian vs. Hispanic). The results were significant,  $F(2, 950) = 24.65, p < .001$ . Results of ANOVA are summarized in 17.

Table 17

*ANOVA on Peer Group Interaction by Ethnicity*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	African American		Caucasian		Hispanic	
						M	SD	M	SD	M	SD
Ethnicity	2	*24.65	.001	.049	.999	3.66	0.49	3.40	0.51	3.52	0.44
Error	950	(0.23)									

*Note:* \*F – Value Note Significant

Due to the significant difference, a Tukey's post hoc test was conducted to determine where mean differences lie, and it revealed that Caucasians had a smaller mean ( $M = 3.40, SD = 0.51$ ) on peer group interaction compared to African Americans ( $M = 3.66, SD = 0.49$ ) and Hispanics ( $M = 3.52, SD = 0.44$ ). Results are summarized in Table 17. This test measures the means differences between three variables. Therefore, the researcher concluded that white students were not influenced by peer group interaction scale factors to persist in college beyond their freshmen year. The results of the Tukey Post Hoc test are summarized in Table 18.

3. Is there a difference in social integration scale factors by ethnicity between students who persist beyond their freshmen year?

To examine research question 3 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction by ethnicity (African American vs. White vs. Hispanic). The results of the

ANOVA were not significant,  $F(2, 950) = 0.87, p = .421$  indicating that no differences exist on faculty interaction by ethnicity. Results of the ANOVA are summarized in Table 19.

Table 18

*Tukey Post Hoc on Peer Group Interaction by Ethnicity*

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	Sig.
African American	Caucasian	.2662 <sup>*</sup>	.000
	Hispanic	.1463 <sup>*</sup>	.000
Caucasian	African American	-.2662 <sup>*</sup>	.000
	Hispanic	-.1199 <sup>*</sup>	.005
Hispanic	African American	-.1463 <sup>*</sup>	.000
	Caucasian	.1199 <sup>*</sup>	.005

*Note:* \* $p < 0.05$ , F-value note significant

Table 19

*ANOVA on Faculty Interaction by Ethnicity*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	African American		Caucasian		Hispanic	
						M	SD	M	SD	M	SD
Ethnicity	2	0.87	.421	.002	.200	3.73	0.79	3.67	0.68	3.74	0.68
Error	950	(0.52)									

3. Is there a difference in social integration scale factors by ethnicity between students who persist beyond their freshmen year?

To examine research question 3 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern by ethnicity (African American vs. White vs. Hispanic). The results as shown in Table 20 were significant,  $F(2, 950) = 13.11, p < .001$ .

Due to the significant difference, a Tukey's post hoc test was conducted to determine where mean differences lie, and it revealed that African Americans had a larger mean ( $M = 3.34, SD = 0.98$ ) on faculty concern compared to Caucasians ( $M = 2.93, SD = 1.05$ ) and Hispanics ( $M = 3.03, SD = 1.14$ ). Results are summarized in Table 20. Therefore, the researchers concluded that African American students were influenced by faculty concerns for student development and teaching to persist in college beyond their freshmen year. Tukey's test measured the means differences between three variables and the results of Tukey Post Hoc Test are summarized in Table 21.

Table 20  
*ANOVA on Faculty Concern by Ethnicity*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	African American		Caucasian		Hispanic	
						M	SD	M	SD	M	SD
Ethnicity	2	*13.11	.001	.027	.997	3.34	0.98	2.93	1.05	3.03	1.14
Error	950	(1.12)									

*Note:* \*F-Value Note Significant

Table 21

*Results of Tukey Post Hoc Test*

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	Sig.
African American	Caucasian	.4130*	.000
	Hispanic	.3108*	.001
Caucasian	African American	-.4130*	.000
	Hispanic	-.1022	.443
Hispanic	African American	-.3108*	.001
	Caucasian	.1022	.443

Note: \* $p < 0.05$ , \*F-value note significant

4. Is there a difference in academic integration scale factors by ethnicity between students who persist beyond their freshmen year? To examine research question 4 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development by ethnicity (African American vs. Caucasian vs. Hispanic). The results of the ANOVA were significant,  $F(2, 950) = 3.00$ ,  $p = .050$ . Results are summarized in Table 22.

Due to the significant difference, a Tukey's post hoc test was conducted to determine where mean differences lie. No differences however, were revealed. Therefore, the researcher concluded that neither ethnicity was affected by academic/intellectual development factors to persist in college beyond their freshmen year. Tukey's test measures the means differences between three variables, and the results are summarized in Table 23.

Table 22

*ANOVA on Academic/Intellectual Development by Ethnicity*

Source	df	<i>F</i>	Sig.	Partial	Power	African American		Caucasian		Hispanic	
						M	SD	M	SD	M	SD
						Eta <sup>2</sup>					
Ethnicity	2	*3.00	.050	.006	.583	3.85	0.56	3.75	0.56	3.77	0.62
Error	950	(0.34)									

*Note:* \*F-Value Note Significant

4. Is there a difference in academic integration scale factors by ethnicity between students who persist beyond their freshmen year? To examine research question 4 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there were differences on institutional/goal commitment by ethnicity (African American vs. Caucasian vs. Hispanic). The results of ANOVA is shown in Table 24 were significant,  $F(2, 950) = 14.44, p < .001$ .

Due to the significant difference, a Tukey's post hoc test was conducted to determine where mean differences lie, and it revealed that Caucasians had a smaller mean ( $M = 2.91, SD = 0.47$ ) on institutional/goal commitment compared to African Americans ( $M = 3.12, SD = 0.54$ ) and Hispanics ( $M = 3.07, SD = 0.47$ ). Results are summarized in Table 24. Therefore, the researcher concluded that white students were not influenced by institutional/goal commitments to persist in college beyond their freshmen year. Tukey's test measures the means differences between three variables, and results are summarized in Table 25.

Table 23

*Tukey Post Hoc on Academic/Intellectual Development by Ethnicity*

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	Sig.
African American	Caucasian	.1078	.050
	Hispanic	.0822	.174
Caucasian	African American	-.1078	.050
	Hispanic	-.0256	.843
Hispanic	African American	-.0822	.174
	Caucasian	.0256	.843

*Note:* \*  $p < 0.05$ .

Table 24

*ANOVA on Institutional/Goal Commitment by Ethnicity*

						African American		Caucasian		Hispanic	
Source	df	<i>F</i>	Sig.	Partial	Power	M	SD	M	SD	M	SD
Eta <sup>2</sup>											
Ethnicity	2	*14.44	.001	.030	.999	3.12	0.54	2.91	0.47	3.07	0.47
Error	950	(0.26)									

*Note:* \*F-Value Note Significant

Table 25

*Tukey Post Hoc Test Institutional/Goal Commitment by Ethnicity*

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	Sig.
African American	Caucasian	.2032 <sup>*</sup>	.000
	Hispanic	.0512	.395
Caucasian	African American	-.2032 <sup>*</sup>	.000
	Hispanic	-.1520 <sup>*</sup>	.000
Hispanic	African American	-.0512	.395
	Caucasian	.1520 <sup>*</sup>	.000

*Note:* \*  $p < 0.05$ , F-Value Note Significant

5. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? To examine research question 5 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there were differences on peer group interaction between students in public PWI and those in PBI. The results as shown in Table 26 were significant,  $F(1, 634) = 22.80$ ,  $p < .001$  indicating that PBI had a smaller mean ( $M = 3.43$ ,  $SD = 0.47$ ) on peer group interaction between students compared to those in PWI ( $M = 3.61$ ,  $SD = 0.44$ ). Therefore, the researcher concluded that public PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 26.

Table 26

*ANOVA on Peer Group Interaction by Public Institutions*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Public school	1	*22.80	.001	.035	.998	3.43	0.47	3.61	0.44
Error	634	(0.21)							

*Note:* \*F-Value Note Significant

5. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? To examine research question 5 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction between students in public PWI and those in PBI. The results of the ANOVA were not significant,  $F(1, 634) = 0.02$ ,  $p = .895$  that no differences exist on faculty interaction between students in public PWI and those in PBI. Results of the ANOVA are summarized in Table 27.

Table 27

*ANOVA on Faculty Interaction by Public Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Public school	1	0.02	.895	.001	.052	3.70	0.66	3.69	0.77
Error	634	(0.52)							



5. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? To examine research question 5 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern between students in public PWI and those in PBI. The results as shown in Table 28 were not significant,  $F(1, 634) = 0.51, p = .477$  indicating that no differences exist on faculty concern between students in public PWI and those in PBI. Results of the ANOVA are summarized in Table 28.

Table 28  
*ANOVA on Faculty Concern by Public Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Public school	1	0.51	.477	.001	.110	3.08	1.08	3.02	1.09
Error	634	(1.15)							

6. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? To examine research question 6 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development between students in public PWI and those in PBI. The results of the ANOVA were significant,  $F(1, 634) = 46.82, p < .001$  indicating that PBI had a smaller mean ( $M = 3.62, SD = 0.63$ ) on academic/intellectual development compared to public PWI ( $M = 3.93, SD = 0.50$ ). Therefore, the researcher concluded that

PBI students were influenced by academic/intellectual development to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 29.

Table 29

*ANOVA on Academic/Intellectual Development by Public Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Public school	1	*46.82	.001	.069	.999	3.62	0.63	3.93	0.50
Error	634	(0.32)							

*Note.* \*F-Value Note Significant

6. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? To examine research question 6 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there were differences on institutional/goal commitment between students in public PWI and those in PBI. The results as shown in Table 30 were significant,  $F(1, 634) = 33.62$ ,  $p < .001$  indicating that PBI had a smaller mean ( $M = 2.89$ ,  $SD = 0.44$ ) on institutional/goal commitment compared to public PWI ( $M = 3.10$ ,  $SD = 0.46$ ). Therefore, the researcher concluded that PBI students were influenced by institutional/goal commitment to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 30.

Table 30

*ANOVA on Institutional/Goal Commitment by Public Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Public school	1	*33.62	.001	.050	.999	2.89	0.44	3.10	0.46
Error	634	(0.25)							

*Note:* \*F-Value Note Significant

7. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? To examine research question 7 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there were differences on peer group interaction between students in private PWI and those in PBI. The results as shown in Table 31 were significant,  $F(1, 315) = 6.11, p < .05$  indicating that PBI had a smaller mean ( $M = 3.46, SD = 0.61$ ) on peer group interaction compared to private PWI ( $M = 3.60, SD = 0.46$ ). Therefore, the researcher concluded that private PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 31.

7. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? To examine research question 7 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction between students in private PWI and those in PBI. The results as shown in Table 32 were not significant,  $F(1, 315) = 0.23, p = .631$

indicating that no differences exist on faculty interaction by students in private schools. Results of the ANOVA are summarized in Table 32.

Table 31

*ANOVA on Peer Group Interaction by Private Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Private school	1	*6.11	.014	.019	.693	3.46	0.61	3.60	0.46
Error	315	(0.29)							

*Note:* \*F-Value Note Significant

Table 32

*ANOVA on Faculty Interaction by Private Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Private school	1	0.28	.615	.001	.077	3.77	0.70	3.73	0.73
Error	315	(0.52)							

7. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? To examine research question 7 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern between students in private PWI and those in PBI. The results as shown in Table 33 were not significant,  $F(1, 315) = 1.13, p = .289$

indicating that no differences exist on faculty concern by private schools. Results of the ANOVA are summarized in Table 33.

Table 33  
*ANOVA on Faculty Concern by Private Institution*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Private school	1	1.13	.289	.004	.185	3.24	1.00	3.12	1.08
Error	315	(1.08)							

8. Is there a difference in academic integration scale factors by between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? To examine research question 8 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development between students in private PWI and those in PBI. The results as shown in Table 30 were not significant,  $F(1, 315) = 0.13$ ,  $p = .716$  indicating that no differences exist on academic/intellectual development by private school. Results of the ANOVA are summarized in Table 34.

8. Is there a difference in academic integration scale factors by between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? To examine research question 8 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there were differences on institutional/goal commitment between students in private PWI and those in PBI. The results as shown in Table 35 were significant,  $F(1, 315) = 7.58$ ,  $p <$

.01 indicating that PBI had a smaller mean ( $M = 3.02$ ,  $SD = 0.55$ ) on institutional/goal commitment compared to private PWI ( $M = 3.19$ ,  $SD = 0.56$ ). The researcher concluded that PBI students were influenced by institutional/goal commitment factors to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 35.

Table 34

*ANOVA on Academic/Intellectual Development by Private Institution*

Source	df	$F$	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Private school	1	0.13	.716	.001	.065	3.83	0.59	3.81	0.54
Error	315	(0.32)							

Table 35

*ANOVA on Institutional/Goal Commitment by Private Institution*

Source	df	$F$	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
Private school	1	*7.58	.006	.024	.784	3.02	0.55	3.19	0.56
Error	315	(0.31)							

*Note:* \*F-Value Note Significant

9. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? To examine research question 9 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there

were differences on peer group interaction between students in public PWI and those in private PBI. The results as shown in Table 36 were significant,  $F(1, 474) = 8.90, p < .01$  indicating that private PBI had a smaller mean ( $M = 3.46, SD = 0.61$ ) on peer group interaction compared to public PWI ( $M = 3.61, SD = 0.44$ ). Therefore, the researcher concluded that private PBI students were influenced by peer group interaction scale factors to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 36.

Table 36  
*ANOVA on Peer Group Interaction by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	*8.90	.003	.018	.846	3.61	0.44	3.46	0.61
Error	474	(0.25)							

*Note:* \*F-Value Note Significant

9. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? To examine research question 9 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction between students in public PWI and those in private PBI. The results as shown in Table 37 were not significant,  $F(1, 474) = 1.27, p = .261$  indicating that no differences exist on faculty interaction between students in public PWI and those in private PBI. Results of the ANOVA are summarized in Table 37.

Table 37

*ANOVA on Faculty Interaction by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	1.27	.216	.003	.202	3.69	0.77	3.77	0.70
Error	474	(0.56)							

9. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? To examine research question 9 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern between students in public PWI and those in private PBI. The results as shown in Table 38 were significant,  $F(1, 474) = 4.64, p < .05$  indicating that private PBI had a larger mean ( $M = 3.25, SD = 1.00$ ) on faculty concern compared to public PWI ( $M = 3.02, SD = 1.09$ ). Therefore, the researcher concluded that private PBI students were influenced by faculty concern for student development and teaching to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 38.

10. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? To examine research question 10 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development between students in public PWI



and those in private PBI. The results as shown in Table 39 were not significant,  $F(1, 474) = 3.42$ ,  $p = .065$  indicating that no differences exist on academic/intellectual development between students in public PWI and those in private PBI. Results of the ANOVA are summarized in Table 39.

Table 38

*ANOVA on Faculty Concern by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	*4.64	.032	.010	.576	3.02	1.09	3.25	1.00
Error	474	(1.13)							

*Note:* \*F-Value Note Significant

Table 39

*ANOVA on Academic/Intellectual Development by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	3.42	.065	.007	.454	3.92	0.50	3.83	0.59
Error	474	(0.28)							

10. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? To examine research question 10 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there

were differences on institutional/goal commitment between students in public PWI and those in private PBI. The results as shown in Table 40 were not significant,  $F(1, 474) = 3.19$ ,  $p = .075$  indicating that no differences exist on institutional/goal commitment between students in public PWI and those in private PBI. Results of the ANOVA are summarized in Table 40.

Table 40  
*ANOVA on Institutional/Goal Commitment by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	3.19	.075	.007	.429	3.10	0.46	3.02	0.55
Error	474	(0.24)							

11. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and Public predominantly black institutions? To examine research question 11 using *Survey Questions Scale 1*, an analysis of variance (ANOVA) was conducted to determine if there were differences on peer group interaction between students in private PWI and those in public PBI. The results as shown in Table 41 were significant,  $F(1, 475) = 15.11$ ,  $p < .001$  indicating that public PBI had a smaller mean ( $M = 3.43$ ,  $SD = 0.47$ ) on peer group interaction compared to private PWI ( $M = 3.61$ ,  $SD = 0.46$ ). Therefore, the researcher concluded that public PBI students were influenced by peer group interaction scale factors to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 41.

Table 41

*ANOVA on Peer Group Interaction by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	<u>PWI</u>		<u>PBI</u>	
						M	SD	M	SD
School Students	1	*15.11	.001	.031	.973	3.61	0.46	3.43	0.47
Error	475	(0.25)							

*Note:* \*F-Value Note Significant

11. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and Public predominantly black institutions? To examine research question 11 using *Survey Questions Scale 2*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty interaction between students in private PWI and those in public PBI. The results of the ANOVA were not significant,  $F(1, 475) = 0.29$ ,  $p = .590$  indicating that no differences exist on faculty interaction by school students. Results of the ANOVA are summarized in Table 42.

11. Is there a difference in social integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions? To examine research question 11 using *Survey Questions Scale 3*, an analysis of variance (ANOVA) was conducted to determine if there were differences on faculty concern between students in private PWI and those in public PBI. The results of the ANOVA were not significant,  $F(1, 475) = 0.13$ ,  $p = .719$  indicating that no differences exist between students in private PWI and those in public PBI. Results of the ANOVA are summarized in Table 43.

Table 42

*ANOVA on Faculty Interaction by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	0.29	.590	.001	.084	3.73	0.73	3.70	0.66
Error	475	(0.47)							

Table 43

*ANOVA on Faculty Concern by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	0.13	.719	.001	.065	3.12	1.08	3.08	1.08
Error	475	(1.16)							

12. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions? To examine research question 12 using *Survey Questions Scale 4*, an analysis of variance (ANOVA) was conducted to determine if there were differences on academic/intellectual development between students in private PWI and those in public PBI. The results as shown in Table 44 were significant,  $F(1, 475) = 10.50$ ,  $p < .001$  indicating that public PBI had a smaller mean ( $M = 3.62$ ,  $SD = 0.63$ ) on academic/intellectual development compared to private PWI ( $M = 3.81$ ,  $SD = 0.54$ ). Therefore, the researcher concluded that public PBI students were influenced by

academic/intellectual development scale factors to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 44.

Table 44

*ANOVA on Academic/Intellectual Development by the Institutions' Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	*10.50	.001	.022	.899	3.81	0.54	3.62	0.63
Error	475	(0.28)							

*Note:* \*F-Value Note Significant

12. Is there a difference in academic integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions? To examine research question 12 using *Survey Questions Scale 5*, an analysis of variance (ANOVA) was conducted to determine if there were differences on institutional/goal commitment between students in private PWI and those in public PBI. The results as shown in Table 45 were significant,  $F(1, 475) = 38.90$ ,  $p < .001$  indicating that public PBI had a smaller mean ( $M = 2.89$ ,  $SD = 0.45$ ) on institutional/goal commitment compared to private PWI ( $M = 3.19$ ,  $SD = 0.56$ ). The researcher concluded that public PBI students were influenced by institutional/goal commitment scale factors to persist in college beyond their freshmen year. Results of the ANOVA are summarized in Table 45.

Table 45

*ANOVA on Institutional/Goal Commitment between Students*

Source	df	<i>F</i>	Sig.	Partial Eta <sup>2</sup>	Power	PWI		PBI	
						M	SD	M	SD
School Students	1	*38.90	.001	.076	.999	3.19	0.56	2.89	0.44
Error	475	(0.24)							

*Note:* \*F-Value Note Significant

*Interview Results**Responses*

Nine hundred and fifty-four students were surveyed using a stratified random sample of 1200. Then five college students were stratified randomly selected from each of the six universities. Each student was assigned a number for selection from his or her university's population. Each participant's number had an equal chance of being selected and the process was the same for each of the six universities. A total of 30 students (5 from each of the 6 universities) completed the interview process using a follow-up questionnaire (Appendix C). The results have been provided in paragraph form. Many of the interviewed participants shared the same answers.

Interviews were audio-taped, transcribed and checked against the original recording to ensure accuracy. The field notes were recorded immediately after each interview to record observations of the interviewer while collecting data. Finally, the follow-up questions provided additional information regarding differences between

college students (White, Black, and Hispanic) who continued beyond their freshmen year at various types of colleges. The follow-up questions included:

- 1) Why did you choose this university?
- 2) Why did you return after your freshman year?
- 3) What would have made you not return for another year to this university?
- 4) What has been the greatest influence on you at this university?
- 5) When did you know this was the correct university for you to attend?

This information was kept in strict confidentiality according to the Committee for Protection of Human Subjects in Research and Baylor University Institutional Review Board (IRB). Finally, the interview responses were provided in the form of descriptive sentences which revealed “participants’ majority responses” to each question. The questions and students’ responses follow.

### *Texas State University*

- 1) Why did you choose this university?

Students were looking for a university with a great reputation. E.S. said, “The University has set high standards.” Also, students were looking to stay close to home. S.H., a college sophomore mentioned many of my friends lived within a 100 mile radius of the campus. Students believed in Texas State University core values of Service, Excellence, Integrity, Teamwork, and Respect.

- 2) Why did you return after your freshman year?

Students returned because of the college atmosphere. Several students indicated they returned because professors were willing to provide educational assistance outside of class. Students felt that professors cared about their success. M.P. said, “He returned

because of the social aspect of the campus life.” The other students felt campus life played an important role in their return for an additional year.

3) What would have made you not return for another year to this university?

Students felt that only if the college did not exist at all would they not return. This response would suggest that the university is meeting the students’ needs. E.S. and several of her friends were involved in a sorority. This campus group organization motivated E.S. and her friends to return. S.H. explained that if she were not involved with friends, or campus groups, she would not have made it this far. Furthermore, if the professors were not supportive of her endeavors, she would have given up some time ago.

4) What has been the greatest influence on you at this university?

Students believed their professors were a huge influence. Additionally, students said professors truly care about the success of students in the classroom. The religious values M.P., E.S, and J.H. have influenced them the most to return to college. They indicated the faculty and staff significantly impact this school. M.P. stated several of his professors have motivated him beyond his imagination. Furthermore, K.M. and others stated that the professors provide more than education, the professors instill values which students feel are very much needed.

5) When did you know this was the correct university for you to attend?

Several students said after the first semester of school. Students felt they learned a great deal. The professors made learning fun. All five students (M.P., S.H., E.S., J.H, and K.M.) never gave a second thought to transferring to a different campus. Students felt the first year prepared them academically for their remaining years.



*University of Mary Hardin Baylor*

1) Why did you choose this university?

Students liked its Christian values and the specific programs. M.W., B.W., K.L.M., G.C., and K.E. chose this institution because of its religious values. All students in this study agreed with M.W's. statement when she said:

I think students should focus more on the Christian values of education. Many times, students get caught up with just having fun in college. They lose focus on what's most important here. Christian values set the tone and culture for the campus.

2) Why did you return after your freshman year?

Students said they were financially able to return. K.E. indicated paying for college was not difficult for her or her friends. When asked why they returned after the first year, many students said, "Being a college graduate would provide them the lifestyle they wanted to live." B.W. and K.L.M. returned because of their social connections to the campus.

3) What would have made you not return for another year to this university?

Students said the cost of an education. G.C. stated, "A rise in tuition cost and fee would have made him and his friends not return." K.L.M. said the cost of books and tuition has made it difficult for others to return. K.E. mentioned the lack of Christian values would have made her not return for another semester. The others agreed with K.E's. statement. If professors did not provide support for students' success, they would not have returned after their freshman year. This statement was said by several of the students.

4) What has been the greatest influence on you at this university?

Overwhelmingly, that *students mentioned faculty support and concern for student success*. Students indicated they are provided tools to be successful. There are support groups to aid in their success that are adult sponsored or student sponsored. Professors seemed to care about each student being successful in his or her class. They provided after-hours support to the students. Because professors care, students are motivated to excel and do their best to achieve excellence.

5) When did you know this was the correct university for you to attend?

All students knew this was the right university for them some time during their first semester. The students based their decision on the Christian atmosphere. M.W., B.W., K.L.M., G.C., and K.E. said they all grew up in Christian families and felt the University of Mary Hardin Baylor's mission closely reflected their values and ethics.

### *Huston-Tillotson University*

1) Why did you choose this university?

Interviewees chose this university because they received either an academic or athletic scholarship. L.B., M.D., and C.M., received athletic scholarships. C.M., L.B., and M.D. believed in their coaches' philosophy. The students' respect for the athletic department and coaches encouraged them to select this university. C.M, L.B, and M.D., felt the coaches built relationships with them which made a difference in returning after their first year. K.C and C.K were more impressed with the academic aspect of the university. These two students believed that the academic aspect of college would carry them further than athletics.

2) Why did you return after your freshman year?

Students admired the professors and college setting. Several students indicated they returned because professors were willing to provide them assistance outside of class. Students felt the professors cared about their success, and students mentioned that they had a great freshman school year, although difficult. C.K., C.M., and K.C. said they returned because they did very well academically.

3) What would have made you not return for another year to this university?

The students said financial status and the lack of support for the quality of learning would have kept them from returning. L.B. and M.D. stated they would not have returned if they had academic issues. A common theme mentioned by the group was their financial status with the university. Students indicated that the scholarship provided them an educational opportunity that otherwise, they would not have been able to afford.

4) What has been the greatest influence on you at this university?

The professors really want you to succeed and actually achieve more than they have achieved. Additionally, students were influenced by the college social environment. Many of the students said sports encouraged them to be more diligent in their studies. Another factor that seemed to have a great influence on students was the friends they met during college.

5) When did you know this was the correct university for you to attend?

The students said when they were presented with an opportunity to attend Huston-Tillotson University; they accepted the offer because at the time, there were no other offers. Students felt it was one of the best decisions they had ever made in life. Many of

the students said, they did not second guess themselves after the decision was made to attend the university. All athletes were involved in social activities on campus. When students were asked “when did you know this was the correct university?” a consensus among the athletes was when the coaches displayed a caring attitude on the recruiting and signing dates.

### *Prairie View A & M University*

#### 1) Why did you choose this university?

The students said it was because of the university and college alumni system. The interviewees’ parents graduated from this institution. The students’ parents wanted them to experience college at a HBCU. At this university, the students felt it was important to follow their parents’ footsteps. They did not consider any other college. There was a strong sense of belonging to this institution. Another important factor was students felt connected to the university socially and academically.

#### 2) Why did you return after your freshman year?

Respondents enjoyed freshmen year and most wanted to see what experiences their sophomore year would hold. J.P., M.C., R.C., M.W., and S.A.H. said academically, they performed well. They were excited about moving to the next level of their classification and the rewards that followed once they graduated from college. Students were also encouraged to return because they were involved socially in a fraternity or sorority.

#### 3) What would have made you not return for another year to this university?

Financial issues with the school or no financial support from family. Additionally, students mentioned the lack of faculty support systems would have

discouraged them from returning to college after their first year. Another reason students would not have returned to college was the lack of financial support from the institution.

4) What has been the greatest influence on you at this university?

Specific programs set up to assist students with academics support. Additionally, the professors want us to succeed in life. Another important factor that influenced these students was the fact that their parents had graduated from this university. The students even mentioned that college life was fun. Getting to know others and developing relationships influenced them to continue beyond their freshman year.

5) When did you know this was the correct university for you to attend?

The students said it was after the first year when friends revealed they were returning. At first, students felt lost in the university system. Interviewees said at the end of their first year, we got more involved in the social aspect of campus. As relationships were developed, it became more difficult to start over at another college. Several students said they knew this was the right choice when they met their significant other.

### *Texas Southern University*

1) Why did you choose this university?

Students' parents were TSU Alumni. S.H., K.H., S.B., A.W., and S.K. parents' attended this university. Similar to Prairie View A & M there was strong sense of loyalty to this institution. Another important factor was students feeling a connection to the university both socially and academically. Additionally, these students felt that TSU faculty empathized with their needs and feelings because the professors were people of color.

2) Why did you return after your freshman year?

Students returned to college after freshman year because of the faculty support. All of these students felt that because their professors were people of color, they could identify better with their struggles in life. It was also important to note that TSU students ensured they were involved with the social fabric of the institution.

3) What would have made you not return for another year to this university?

Lack of financial assistance and family support or low standards set for high, quality learning. These students felt it was difficult to compete with others if they did not complete their education. All of these students needed financial support from the university in order to remain in college. Several students mentioned they all struggled at some point in their educational careers. Therefore, it was very important for them to academically stay the course even though they might not be doing well. Students mentioned if they were not successful in college academically, they would have given up educationally.

4) What has made the greatest influence on you at this university?

The greatest influence on these students was their professors. Students said they seemed to really care about the entire student. Additionally, it was indicated their teachers were more than just “college professors.” K.H., S.B., A.W., and S.K. influenced other students to succeed. The interviewees believed that their faculty was natural leaders.

5) When did you know this was the correct university for you to attend?

The students said it was the spring of freshmen year. Students knew this was the correct university when most of their friends returned to college, and most of their

professors knew them personally. These students never wanted to attend any other college. When asked, “When did you know this was the correct choice”? The group’s consensus comment was, “sometime during the spring semester.”

### *Sam Houston State University*

#### 1) Why did you choose this university?

Students’ parents attended this university and the institution was close to home. L.S., C.M., M.H., S.H., and P.B. were born and raised near Sam Houston State University. This was one deciding factor of why the students chose this institution. Also, students indicated their goal was to attend the same university as their parents.

#### 2) Why did you return after your freshman year?

Actually, the professors made the difference. The students believed the professors were sincere about them. The female students indicated that belonging to their college organization encouraged them to return after their freshman year. L.S., C.M., and P.B indicated they were excited about returning after their freshman year because they had established lifelong personal relationships with friends.

#### 3) What would have made you not return for another year to this university?

The lack of understanding of how important a college degree is to success. C.M., M.H., and S.H. said if finances were not in place to take care of tuition costs they would not return after their freshman year of college. Also, C.M. and L.S said, “I would not have returned if my academic performance dropped substantially or I was unable to keep up academically.”

4) What has been the greatest influence on you at this university?

Overwhelmingly, the students said the professors made the biggest difference. Also, the college atmosphere, school organizations, and relationships influenced students to achieve and set higher standards. With this group, the students' parents played an important role in influencing them to attend and remain in college.

5) When did you know this was the correct university for you to attend?

Students applied here first; therefore, it was when the acceptance letter was received. Also, several students indicated they knew this was the correct university in the fall. Students also knew this was the correct university when they got involved in social organizations.

### *Summary of Findings*

This study examined the persistence differences between (White, Black, and Hispanic) students who progressed toward graduation after their freshmen year using social and academic integration scale factors. The researcher measured retention differences by gender, ethnicity and various types of universities. When data were analyzed by gender, there were no significant differences on the responses to the social and academic integration scales 1-5. However, when the focus was ethnicity, there were significant differences on social integration scales 1 and 3. White college students had a smaller mean score when compared to African American and Hispanic students which indicated that white students were not influenced by peer group interaction scale factors to persist in college beyond their freshmen year. However, African American students were influenced by faculty concern for student development and teaching to persist in college beyond their freshmen year.



In addition, when ethnicity was measured with scales 4 and 5, there were significant differences. Again, white students had a smaller mean score when compared to African American and Hispanic students. The researcher concluded that white students were not influenced by academic/intellectual development factors nor were they influenced by institutional/goal commitment to persist in college beyond their freshmen year.

Data findings between students in public PWI and those in PBI were significant. PBIs had a smaller mean score on peer group interaction, scale 1 indicating that PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. In addition, when using academic scales 4 and 5 to measure students at public PWI and those in PBI, the results revealed significant differences. Again, PBIs had a smaller mean score on both academic/intellectual development and institutional/goal commitment. The researcher concluded that PBIs students were influenced by academic/intellectual development and institutional/goal commitment to persist in college beyond their freshmen year.

Peer group interaction was a significant factor during the interviews of students at Texas State University. The majority of students revealed they returned because of the college atmosphere. While others indicated, it was because of the university's Christian values at Texas State University. The strong Christian values were also evident during the interviews with the University of Mary Hardin Baylor students. Peer group interaction proved to be a strong significant factor for these students in their decision to persist after their freshmen year.

When the focus was on students' data from private PWI and private PBI, scale 1 revealed a significant difference; PBIs had a smaller mean on peer group interaction. The researcher concluded that private PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. Also, significant differences were found with the institutional/goal commitment which is academic integration scale 5. Again, private PBIs had a smaller mean score when compared to private PWI which the researcher concluded that private PBI students were influenced by institutional/goal commitment factors to persist in college beyond their freshmen year.

Another comparison between students in public PWIs and those in private PBIs revealed significant differences in scales 1 and 3. Scale 1 revealed significant differences in peer group interaction whereas; PBIs had a smaller mean score when compared to PWIs. Therefore, private PBI students were influenced by (scale 1) peer group interaction, and (scale 3) faculty concern for student development and teaching to persist in college beyond their freshmen year.

Peer group interaction, interaction with faculty, and faculty concern for student development were revealed as important factors during the interviews with college students at Huston-Tillotson University, Sam Houston State University, and Texas Southern University. Many of the students at these campuses emphasized that the students admired their professors and college setting. Several students indicated overwhelmingly that the professors made the biggest difference. These students mentioned that their professors were more than just professors. In fact, Texas Southern University students acknowledged they returned after their freshmen year because of faculty support.

Finally, there were significant differences in scale 1 peer group interaction when comparing students in private PWIs and public PBIs. Public PBIs had a smaller mean when compared to private PWIs. Significant differences were also discovered in scale 4 academic/intellectual development and scale 5 institutional/goal commitment when comparing the two institutions. Public PBIs had a smaller mean score when compared to private PWIs. Therefore, the researcher concluded that public PBI students were influenced by peer group interaction factors and institutional/goal commitment to persist in college beyond their freshmen year.

The interviews revealed several colleges with significant factors in academic/intellectual development and the institutional and goal commitment. Students at Texas State University felt that only if the college did not exist would they not have returned. This would suggest that the university was meeting its student needs. Additionally, students at Texas Southern University indicated that if the university standards were low and student expectations were not high, they would have not returned for an additional year to this college. Students at Prairie View A & M indicated that specific programs geared to assist students with academic support influenced their decision to persist after their freshmen year.

White students were not influenced by peer group interaction factors to remain in college beyond their freshmen year. However, this was an important factor for African American students. Not only were African American students influenced by peer group interaction, this research revealed that African American students at private and public PBIs were affected by faculty concerns for student development and teaching,

academic/intellectual development, and institutional/goal commitment to persist in college beyond their freshmen year.

Therefore, it is imperative that all university systems develop specific social programs to assist in the development of keeping students in college beyond their freshmen year. Additionally, institutions should develop academic and social focus groups to assist students with particular problems they have as freshmen in college. Without lowering standards, another recommendation for increasing the persistence beyond freshmen year of college could include hiring professors who are well-trained in identifying the needs of students to aid in their success. Students should not be viewed as a number in-line waiting to get the counter to pay for an item. Instead, professors must take an interest in the students who put forth effort to succeed. Maybe then as freshmen in college, students will have the motivation to prevail even when the odds may be against them. Table 46 reveals connections between statistical and narrative data for Chapter Four.

The purpose of this study: (1) to examine differences in persistence between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities. To carry out the purpose of this study, 12 research questions were asked about gender, ethnicity, and various types of universities. The results are presented in the next chapter as research question data.

Table 46

*Statistical and Narrative Data*

Research Questions 1-12	Integration Scales 1-5	Survey Question Item(s) 15-44	Interview Question Item(s) 1-5	Statistical Data Evidence
1	1, 2 & 3	15 thru 31 Social Factors	1	Tables 12, 13, & 14
2	4 & 5	32 thru 44 Academic Factors	1	Tables 15 & 16
3	1, 2 & 3	15 thru 31 Social Factors	1	Tables 17, 18, 19, 20, 21 & 22,
4	4 & 5	32 thru 44 Academic Factors	1	Tables 23, 24 & 25
5	1, 2 & 3	15 thru 31 Social Factors	4	Tables 26, 27 & 28
6	4 & 5	32 thru 44 Academic Factors	4	Tables 29 & 30
7	1, 2 & 3	15 thru 31 Social Factors	2	Tables 31, 32, & 33
8	4 & 5	32 thru 44 Academic Factors	2	Tables 34 & 35
9	1, 2 & 3	15 thru 31 Social Factors	3	Tables 36, 37, & 38
10	4 & 5	32 thru 44 Academic Factors	3	Tables 39 & 40
11	1, 2, & 3	15 thru 31 Social Factors	5	Tables 41, 42, & 43
12	4 & 5	32 thru 44 Academic Factors	5	Tables 44 & 45

In addition, Chapter Five is composed of the summary, conclusions, and recommendations. The chapter provided a brief summary followed by the conclusions and demographic question data. Next, the researcher revealed the research question data with a discussion of findings from interview data and recommendations for higher education institutions.

## CHAPTER FIVE

### Summary, Conclusions, and Recommendations

#### *Summary*

The purpose of this study was to examine differences in retention between White, Black, and Hispanic students who persist in college beyond their freshmen year using social and academic integration scale factors; and examine retention differences by gender, ethnicity, and types of universities. The study used sophomore, junior and senior college students as participants in the field research. The study also analyzed gender, ethnicity, and various types of colleges and university students to determine whether or not there were significant differences, and why they persist beyond their freshmen school year. Additionally, the researcher used Drs. Pascarella and Terenzini's model as the primary theoretical framework lens for analyzing and interpreting of data.

The study was significant because it examined research for reasons as to why minority college enrollment was under-represented. First, the number of minority undergraduate students in college has been smaller for decades when compared to white students. Furthermore, the study examined reasons for extreme differences between colleges, and universities in regards to college enrollment for minority students. Second, African American students are more than twice as likely to drop out of college as white students. Therefore, this study was important because it explored why African American males have the worst attrition rate among both sexes and all racial/ethnic groups. Third, although enrollment numbers have increased, African American students' persistence at institutions of higher education has continued to be an important issue for many years.

African American students' retention rate warrants study because universities base funding on minority representation, and this study explained why these students either persist beyond their freshman year or withdrew from the institution.

Hispanics are the fastest growing population in the United States and in the last few years they have become the largest minority population. As college enrollment for Hispanic students has increased, the acknowledgement of the Hispanic students' dropout rate, when compared to white students, cannot be ignored. Therefore, this study was important because it provided answers as to why Hispanic students are not equally represented at the university level as white students. Recent research showed that only 11% of the Hispanic population graduate from college, compared to 25% of Whites (U.S. Department of Commerce, Census Bureau, 2000). Because Hispanic students have a higher dropout rate when compared to white students, the economic status of these students was lower than white students. The high dropout rate explains the differences in wages between Hispanics and Whites. Recent research revealed that the median hourly earnings for U.S. born Hispanics are 2% less than Whites, and even though there is a growth in the Hispanic population, when considering technology occupations, Hispanics earn 62% less than Whites (U.S. Department of Education, Council of Economic Advisers, 2000). This study was important because it examined factors that increase retention rates, and was significant to all stakeholders who wish to retain students in higher education.

Public and private universities stand to increase their knowledge base of how to improve minority students' college persistence from this research. Consequently, this study was significant because it revealed the inequities in college persistence between



universities and among various ethnic groups in selected public and private institutions. Thus, investigating what caused minority students to persist in college beyond their freshmen year provided answers as to how the selected universities can reduce their attrition rates.

### *Conclusions*

The following conclusions were based on the data reported in Chapter Four. The findings revealed the differences in social and academic integration scale factors by gender, ethnicity, and various institutions of higher education that influenced college students to continue beyond their freshmen year. Presented first were the demographic data. Next, the research question data were presented followed by the interview questions data. Findings from the interviews revealed commonalities that encouraged minority students to persist in college beyond their freshmen school year.

### *Demographic Question Data*

Question 1 of demographic data asked Gender of participants. The results revealed there were 477 male and 477 female participants.

Question 2 of demographic data asked Race/Ethnic Origin of participants. The results revealed there were 318 African Americans, 318 Hispanics, and 318 Caucasians.

Question 3 of demographic data asked SAT scores combined of participants. The results revealed that the majority of participants 508 (53.4%) scored 1199 - 900. The results were self-reported.

Question 4 of demographic data asked High School GPA of participants. The results revealed that the majority of participants 530 (55.6%) had between 3.0 and 3.9 and were in the top 25 percentile. GPA scores were self-reported.

Question 5 of demographic data asked Parental Income of participants. The results revealed that the majority of participants 351 (36.8%) had parental incomes that were between \$30, 001 and \$60,000. Data were self-reported.

Question 6 of demographic data asked Parent's Education Level of participants. The results revealed that the majority 339 (35.6%) of participants' parents had a high school education.

Question 8 of demographic data asked participants the Expected Number of Informal Contacts with Faculty per month. The results revealed that the majority 569 (59.9%) expected between one to five contacts per month outside of class.

Question 9 of demographic data asked Number of High School Extracurricular Activities participated in. The results revealed that the majority 450 (47.2%) participated in 3 or 4 activities in high school.

Question 11 of demographic data asked participants their Highest Expected Academic Degree. The results revealed that more than one-half (50.8%) expected to obtain a Masters degree.

Question 12 of demographic data asked students their College Selection Choice. The results revealed 43.8% answered their current institution was their first choice.

Question 13 of demographic data asked participants whether attending this University was the Right Choice. The results revealed over one-half (53.6%) responded affirmatively to the question.

Question 14 of demographic data asked participants the Importance of Graduating from College. The results revealed (92%) responded that graduating from college was very important.

### *Research Question Data*

Questions 1 and 2: Is there a difference in social/academic integration scale factors by gender between students who persist beyond their freshmen year? Data revealed that no significant differences existed; suggesting that none of the integration scale factors influenced students to persist in college beyond their freshmen year, by gender. Gender did not play a role in retaining students beyond their freshmen year according to this study. However, based on previous studies performed on student persistence, a descriptive profile was conducted that identified disparities by gender, ethnicity, and financial status from year-to-year. Previous research revealed that persistence between genders varied extensively (DuBrock, 1999). More women were likely to persist beyond their first year of college than men (Rajasekhara & Hirsch, 2000). However, Reasons (2001) conducted a study and found that gender failed to reveal significant importance.

Findings from previous literature on gender have been mixed with regard to persistence in college. In a study of nearly 23, 000 students at three community college campuses over a three year period, first and second semester persistence were greater for women than men (Rajasekhara & Hirsch, 2000). Conversely, using data from ACT, Reasons (2001) conducted a study and found that gender failed to reveal significance importance. Additionally, gender also played a less significant role in a study by St. John (et. al 2001). However, in a study conducted by DeBerard & Julka, (2000), gender was

selected as a demographic risk factor primarily because it had been shown to be a statistical correlate of both first semester GPA and first semester academic warning status. Despite the disparity of significance, gender appeared to show significant differences in previous research and no significance in this study.

Questions 3 and 4: Is there a difference in social/academic integration scale factors by ethnicity between students who persist beyond their freshmen year? The researcher compared White students to African American and Hispanic college students, and the findings revealed significant differences in four areas: peer group interaction, faculty concern for student development and teaching, academic/intellectual development, and institutional/goal commitment. Faculty interaction was the only scale factor that showed no significant difference when comparing the ethnicity of college students. This finding contradicted previous research because Pascarella and Terenzini's (1980) model emphasized that interaction between student and faculty was essential to students' educational outcomes, as well as persistence in college. Furthermore, Tinto (1993) emphasized that social integration variables used in the Spady Model increased frequency and the quality of student-faculty interaction. The rationale guiding this belief was the level of commitment to the institution, and student graduation was determined by the extent to which the students developed a sense of socialization and achievement.

The researcher studied the peer group interaction by ethnicity using African American, White, and Hispanic students to conduct the assessment. The results were significant. As a direct result of the findings, Tukey's post hoc test was conducted to determine where the differences were within the mean scores. It revealed that white students had a smaller mean score on peer group interaction when compared to African

American and Hispanic college students. The researcher concluded that white students were not influenced by peer group interaction scale factors to persist in college beyond their freshmen year. Astin's (1993) research discovered the three most important forms of student involvement were academic involvement, faculty involvement, and involvement with student peer groups. Furthermore, in a direct quote, Astin states, "A students' peer group was the single most potent source of influence on educational growth and development during the undergraduate years" (p. 398).

Next, faculty concern was assessed by ethnicity using African American, White, and Hispanic students to conduct the assessment. The findings were significant in this study. As a result, a Tukey's post hoc test was conducted to determine where the differences are within the mean scores. The results revealed that African Americans had a larger mean score on faculty concerns for student development and teaching when compared to White and Hispanic college students. Therefore, the hypothesis was accepted for African American students. This suggests that African American students were influenced by faculty concerns for student development and teaching by those who persist in college beyond their freshmen year. These results coincide with the principles of Tinto's model that was supported by research of Braxton and Mundy (2001-2002) which included the following description of institutions that have effective persistence programs:

First, committed to the students they served; secondly, that institutions had a commitment to the education of all students, not just a few of the elite ones; lastly, that institutions were committed to the development of students in supportive social and educational communities in which all students were integrated as competent members increased student success. (p. 94)

When academic/intellectual development was assessed by ethnicity using White, African American, and Hispanic students to conduct the assessment, the results were significant. Therefore, Tukey's post hoc test was conducted to determine where differences were within mean scores. The results revealed there were no differences between ethnicities using Tukey's post hoc test. This result suggests that while the initial analysis did show differences in academic/intellectual development with students who persist in college beyond their freshmen year, Tukey's post hoc test revealed no significant differences between ethnicity. The initial study results coincide with Tinto's beliefs that the academic system of the college environment influenced students' academic performance in college (1993).

When institutional/goal commitment was assessed using ethnicity, the results were significant. Therefore, Tukey's post hoc test was conducted to determine where the differences are within mean score. It revealed that White students had a smaller mean score on institutional/goal commitment compared to African American and Hispanic college students. As a result, the null hypothesis was rejected. Therefore, the results suggested that White students were not influenced by institutional/goal commitment to persist in college beyond their freshmen year. The findings contradict previous studies.

According to Pascarella and Terenzini's Model (1980), goal commitment and the institution's commitment influenced how students performed in college. The influence various colleges had on each ethnicity group that persist beyond their freshmen year was significant with peer group interaction, academic/intellectual development, and institutional/goal commitment. However, faculty interaction and faculty concern for student development and teaching revealed no significant differences. The results of the

last two scale factors suggested that these factors did not influence students to persist in college beyond their freshmen year when taking into account their ethnicity.

Furthermore, Pascarella, Terenzini, and Wolfe (1996) revealed “the stronger the individual’s level of social and academic integration, the greater his or her commitment to the institution and goals of college graduation (pp. 155-156).

Previous research on ethnicity and retention beyond the freshmen year, by Hagedorn, Maxwell, and Hampton (2001-2002), revealed that persistence among African-American men in colleges were among the lowest of all ethnic groups nationally. This study found significance differences between students who persisted in college and students who did not when using certain scale factors. Research shows students’ high school grades, age, number of courses, a positive view of personal skills, clear high goals, and the early identification of college major appeared to be very significant for African American students according to Hagedorn, Maxwell, and Hampton.

Other research revealed two additional factors impacting students’ persistence beyond the first year of college. One was mother’s educational attainment and whether the family is low-income (Ishitani & DesJardins, 2002-03). Braunstein, Lesser, and Pescatrice (2006) also found that for many freshmen ethnicity/race, high school grades, family income, and financial aid (grants have a positive effect; loans have a negative effect) are significant factors in determining whether or not a freshman student will be successful or unsuccessful.

Questions 5 and 6: Is there a difference in social/academic integration scale factors between students who persist beyond their freshmen year in public white institutions and public black institutions? Thus, peer group interaction was assessed

between college students in public PWIs and those in PBIs, and the results were significant. The findings revealed public PBIs had a smaller mean score on peer group interaction when compared to public PWIs. The results suggested that PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. Astin's (1993) research revealed "The student's peer group was the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

When academic/intellectual development was assessed between students in public PWIs and those in public PBIs, the results were significant. The findings suggested that public PBIs had a smaller mean score on academic/intellectual development when compared to public PWIs. The results suggested that PBI students were influenced by academic/intellectual development to persist in college beyond their freshmen year.

Assessing institutional/goal commitment between students in public PWIs and those in PBIs, the results were significant. The findings suggested that public PBIs had a smaller mean on institutional/goal commitment compared to PWIs. The results suggested that PBI students were influenced by institutional/goal commitment to persist in college beyond their freshmen year.

The findings of the literature review of various colleges revealed that providing support services that targeted minority students, implementing cultural and social services, and devising comprehensive retention plans were steps that helped facilitate minority student achievement at PWIs (Arminio et al., 2000). Furthermore, Tinto (2006) expressed the importance of integrating students into campus life, both academically and socially. As a direct result, students believed they belonged there and were less likely to



drop out of college. Braxton and Mundy (2001-2002) included the following description of institutions that have effective persistence programs:

First, institutions committed to the students they served; secondly, that institutions had a commitment to the education of all students, not just a few of the elite ones; lastly, that institutions were committed to the development of supportive social and educational communities in which all students were integrated as competent members. (p. 94)

In fact, Pascarella, Terenzini, and Wolfe (1996) revealed “the stronger the individual’s level of social and academic integration, the greater his or her commitment to the institution and goals of college graduation (pp. 155-156). Astin (1984) stated it best in a quote:

An involved student was one who devoted considerable energy to academics, spends much time on campus, participated actively in student organizations, activities, and interacted often with the faculty. (p. 292)

Questions 7 and 8: Is there a difference in social/academic integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and private predominantly black institutions? The results revealed that when peer group interaction was assessed between students in private PWIs and those in PBIs, the results were significant. The findings suggested that private PBIs had a smaller means score on peer group interaction compared to private PWIs. These results suggested that PBI students were influenced by peer group interaction to persist in college beyond their freshmen year. Researchers compared four and six year institutions’ graduation rates that grant public bachelor degrees, and found public institutions had lower rates than private institutions (Scott, Bailey, & Kienzi 2001).

However, faculty interaction, faculty concern for student development, and academic/intellectual development were assessed between students in private PWIs and those in PBIs, and found that there were no significant differences. The results of these findings suggested that students at private predominantly white institutions were not influenced by faculty interaction when comparing the students in private PWIs and those in PBIs that persist in college beyond their freshmen year. Nettles' (1988) research revealed fewer black undergraduates were enrolled creating a less than average faculty concern for individual development.

In contrast, institutional/goal commitment were assessed between students in private PWIs and those in PBIs, the results were significant. Therefore, these results revealed that PBIs had a smaller mean score on institutional/goal commitment factors when compared to private PWIs. Therefore, PBI students were influenced by institutional/goal commitment factors to persist in college beyond their freshmen year.

Questions 9 and 10: Is there a difference in social/academic integration scale factors between students who persist beyond their freshmen year in public predominantly white institutions and private predominantly black institutions? The study revealed significant difference occurred in peer group interaction. It was assessed by using students in public PWIs and those in private PBIs. The results were significant. The findings suggested that private PBIs had a smaller mean score on peer group interaction when compared to public PWIs. These results suggested that PBI students were influenced by peer group interaction scale factors to persist in college beyond their freshmen year.

The differences in faculty interaction, academic/intellectual development, and institutional/goal commitment scale factors revealed no significant differences.

Therefore, the results suggested that none of these scale factors influenced college students to persist in college beyond their freshmen year. However, faculty concern for students' development and teaching revealed different results.

There were differences with faculty concern between students in public PWIs and those in private PBIs. The results were significant. These results suggested that private PBIs had a larger mean score on faculty concern when compared to public PWIs. The results suggested that private PBI students were influenced by faculty concern for student development and teaching when compared to other college students that persist in college beyond their freshmen year. The findings from this study of PWIs and PBIs indicated that these institutions had the strongest effects on the student's chances of completing a college degree. Astin's (1993) research revealed the more selective the institution the better chance of the student finishing college.

Questions 11 and 12: Is there a difference in social/academic integration scale factors between students who persist beyond their freshmen year in private predominantly white institutions and public predominantly black institutions? The study revealed significant differences on peer group interaction between students in private PWIs and those in public PBIs. The results were significant. The findings suggested that public PBIs had a smaller mean score on peer group interaction when compared to private PWIs. As a result, public PBIs revealed that peer group interaction scale factors influenced college students to persist in college beyond their freshmen year.

The faculty interaction and faculty concern for student development were analyzed between students in private PWIs and those in public PBIs. The results were not significant. The findings suggested that no differences exist with faculty interaction and faculty concern for student development between students in private PWIs and those in public PBIs, who persist beyond their first year of college.

Pascarella and Terenzini (1991) concluded in their study that “freshman to sophomore persistence was positively and significantly related to total amount of student-faculty non-classroom contact with faculty and particularly the frequency of interaction with faculty to discuss intellectual matters” (p. 394). Specifically, Lunquist, Spalding, and Landrum (2002-2003) found that certain faculty behaviors contributed to student persistence, such as faculty members being supportive of student needs, being approachable, and returning telephone calls and emails in a timely manner.

The last two research questions revealed differences that were academic/intellectual development and institutional/goal commitment. The academic/intellectual development was analyzed between students in private PWIs and those in public PBIs. The results were significant. The findings suggested that public PBIs had a smaller mean score on academic/intellectual development when compared to private PWIs. Therefore, results revealed public PBIs were influenced by academic/intellectual development scale factors that caused college students to persist in college beyond their freshmen year.

Additionally, institutional/goal commitment was analyzed between students in private PWIs and those in public PBIs. The results were significant. The finding suggested that public PBIs had a smaller mean score on institutional/goal commitment

when compared to private PWIs. Therefore, public PBI data revealed institutional/goal commitment scale factors influenced college students to persist in college beyond their freshmen year. However, Astin's (1982) study identified both personal and environmental factors that appeared to have had an impact on the departure process of African American students enrolled in PBIs.

Although gender revealed no significant differences; ethnicity and various colleges revealed different results. The White, African American, and Hispanic college students' and various college data revealed significant impact on college student persistence. These results suggested that these significant scale factors influenced college students to persist in college beyond their freshmen year.

As the researcher uncovered the differences and results in this study, why should college persistence matter? Reports revealed about a fourth of students do not return to college after their first year if they drop out (Devarics & Roach, 2000). The exact reasons for the disparity in college persistence among African American, White, and Hispanic college students signaled an importance of finding a solution to the problem of keeping college students in school beyond their first year. As a result, society would benefit from having a larger and more representative number of young people graduating with the skills to meet its ever changing needs (Tinto, 2006).

Researchers, Braxton and Brier (1989), Rendon, (1994), Hurtado and Carter (1997), Pascarella and Terenzini (1990), and others modified and added additional factors that were found to impact the decisions of many college students to remain in college or drop out, temporarily or permanently. An accumulation of these efforts had led to the creation of another model called Student/Institutional Engagement Model (Nora, 2004).

After concluding the findings from the field survey research, the researcher conducted interviews which sought to explain more in-depth the reasons for the differences among White, Black and Hispanic college students' persistence. From the literature review, it was revealed that minority college students do not persist in college in the same proportions as White students. Therefore, a follow-up questionnaire was also conducted consisting of the following.

A stratified random group total of 30 students (5 from each of the 6 universities) completed the interview process using a follow-up questionnaire (Appendix C). Each institution's results have been provided in the form of descriptive sentences which were the participants' majority answers. Majority responses meant that three or more of the interview participants shared the same answers. The interview questions sought to explain more about the university differences and some commonalities of college students who persist beyond their freshmen year. Results from questions follow.

### *Discussion of Findings from Interview Data*

#### 1. Why did you choose this university?

Students chose their particular university for various reasons. Most students considered how close the university was to their home. Others selected their university because of its great reputation, Christian values, and specific programs. Many of the students in PBIs who were interviewed chose their particular college because they were on scholarship or their parents had attended the university. These students seemed to want to follow in their parents footsteps by attending the same university.

In a study conducted by Titus (2004), he revealed that selectivity, as measured by the average student academic ability at an institution, had a contextual effect on college

students' persistence that reflects a positive increment to the chance of persistence.

Pascarella and Terenzini (2005) reviewed literature on college selectivity by students, and concluded that selectivity tended to enhance persistence after variations in background characteristics of students at various institutions were taken into account. Mainly, institutions where six-year graduation rates occur, public institutions have lower rates than private institutions (Scott, Bailey, & Kienzi, 2001). This question was linked to research questions number 1 and 2.

## 2. Why did you return after your freshman year?

Students returned after their first year for particular reasons. Certain college professors, faculty support, and college atmosphere were the most influential reasons why students returned to their individual campuses. Although the main purpose for attending college is to get a degree, some students returned because they wanted to see if their sophomore year would be anything like their freshmen year. Three students mentioned it was an expectation of their parents since they were financially able to pay for it.

When predicting freshmen persistence in college or the voluntary decision to drop out theoretically, Pascarella and Terenzini (2005) revealed students come to college with a range of background characteristics. They include sex, race, academic ability, family social status, etc. Thus, to some degree these variables can inhibit the chances of college completion. In a study performed by Pascarella and Terenzini (1993), they tested their instrument in a study about predicting freshmen persistence or voluntary decision to drop out of college. The results revealed interesting differences that were observable in the

patterns of influence that existed when the data were disaggregated by institution type (Pascarella & Terenzini, 1993). This question was linked to research questions 7 and 8.

3. What would have made you not return for another year to this university?

Students would not have returned to their university for particular reasons. The main reasons students indicated that they would not have returned was due to lack of financial support from parents, rise in tuition cost, or low educational standards set by the university. A few students even mentioned the only way they would not have returned was if the college no longer existed. This would suggest that these students were getting their educational needs met at the same time while enjoying their college experiences.

Bean (1980) determined in his study that institutional quality and opportunity for men, while excluding satisfaction for women were the two most important variables influencing commitment; therefore, men left the university even though they were satisfied, and women who were satisfied were more committed to the institution and were less likely to leave college (p. 178). Braunstein, Lesser, and Pescatrice (2006) found that for many freshmen ethnicity/race, high school grades, family income, and financial aid grants have a positive effect and are significant factors in determining whether or not a freshmen student will return back to college. This question was linked to research questions number 9 and 10.

4. What has been the greatest influence on you at this university?

Overwhelmingly, the professors were the most influential people at the universities. Professors were depicted as concerned about the entire student. Several college students believed their professors even wanted to see students succeed and attain more than them. A few students felt there was a genuine concern for student success.



This caring feeling seemed to permeate throughout campuses. Some students mentioned that professors would offer additional time to assist students with specific programs if they needed academic support. Pascarella and Terenzini (2005) found that participation in extracurricular activities had a positive and significant effect on persistence to graduation. Tinto (1987) revealed that social and academic integration caused students to remain in college beyond their first year or until degree completion. This question was linked to research questions number 5 and 6.

5. When did you know this was the correct university for you to attend?

The answer for this question ranged from when students received their acceptance letter to the end of year one. Three students mentioned getting admitted to college of their first applied choice was most important and they did not want to attend another institution because it was the most positive choice they had made in life. While others mentioned they knew this was the best university for them when the opportunity presented itself. Nonetheless, some even mentioned they realized the importance of their university choice some time during their first year. Rhodes and Nevill (2004) examined student satisfaction and dissatisfaction with a new educational university, and revealed emerging themes were college atmosphere, teaching and learning, debt, financial problems, workload, and student support. This question was linked to research questions number 11 and 12.

Additional findings from the interviews revealed some commonalities between many of the universities. Professors made the most impact on college students' perceptions on the retention rate. The lack of financial assistance and family support proved to be significant factors in the students' perceptions of overall college success.

Another common aspect stemming from the interviews of college students was the institution's value system. These commonalities shed more light on the additional aspects of college students from various colleges that influenced students to continue beyond their freshmen year. Students believed they selected the best university provided each individual's circumstances.

Although, the research supported gender as a significant factor in college student retention rate, it did not show any significance in this study. However, the findings of ethnicity and various types of colleges did show significant influence on the retention rate of college students beyond their freshmen year. The ethnicity findings revealed in scale one–peer group interaction, scale three–faculty concern for student development, scale four–academic/intellectual development, and scale five–institutional and goal commitment significantly influenced students who remained in college beyond their freshmen year. Lastly, the findings from various types of colleges revealed significant differences in students who remained in college beyond their freshmen year.

The differences between public universities (PWI vs. PBI) revealed significant influence on students who remained in college beyond their freshmen year using scale one–peer group interaction, scale four–academic/intellectual development, and scale five–institutional/goal commitment. Additionally, the differences between private universities (PWI vs. PBI) revealed significant influence on students who remained in college beyond their freshmen year using scale one–peer group interaction, and scale five–institutional/goal commitment.

The differences between (public PWI vs. private PBI) revealed significant influence on students who remained in college beyond their freshmen year using scale

one–peer group interaction, and scale three–faculty concern for student development. Lastly, the differences between (private PWI vs. public PBI) revealed significant influence on students who remained in college beyond their freshmen year using scale one–peer group interaction, scale four–academic/intellectual development, and scale five–institutional/goal commitment.

The purpose of this study: (1) to examine differences in retention between (White, African American, and Hispanic) students who persist beyond their freshmen year using social and academic integration scale factors; and (2) to examine retention differences by gender, ethnicity and types of universities. To carry out the purpose of this study, the 12 previous research questions were asked about gender, ethnicity and various types of universities. The findings varied between three independent variables from significant to not significant.

### *Recommendations for Higher Education Institutions*

1. Institutions should examine the contributing factors that caused the growing gender gap in African American and Hispanic college graduation by conducting additional research on best practices/programs/activities that promote recruitment and retention of more culturally diverse faculty and students.

2. Institutions should examine how motivation (extrinsic vs. intrinsic) affects gender when comparing it to various ethnicities of college students.

3. Institutions should examine what other effects gender has on college campuses that promotes retention to encourage more cultural diversity.

4. Institutions should examine the effects of persistence on other ethnic minority groups other than African American and Hispanic.

5. Institutions should examine how two year colleges are affected by retention rate and compare them to various other college campuses such as private and public universities.

6. Institutions should examine additional psychological, social, and organizational influences that impact both social/academic integration and the commitment on various universities.

7. Institutions should examine the effects of religion on college student persistence.

## APPENDICES

## APPENDIX A

### Permission Letter

PENNSSTATE



Patrick T. Terenzini  
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and Senior Scientist

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April 3, 2008

Mr. Kenneth Matthews  
1811 Sabine Ln.  
Richmond, Texas 77469

Dear Mr. Matthews:

Thank you for your inquiry about the "integration" items and scales Dr. Ernest T. Pascarella developed to operationalize Tinto's model of college student persistence. The scales have proven useful in explaining other educational outcomes. Information on the scales' psychometric properties is given in:

Pascarella, E.T., & Terenzini, P.T. (1980). Predicting persistence and voluntary dropout decisions from a theoretical model. Journal of Higher Education, 51, 60-75.

Terenzini, P.T., Lorang, W.G., & Pascarella, E.T. (1981). Predicting freshman persistence and voluntary dropout decisions: A Replication. Research in Higher Education, 15, 255-265.

Fox, R. N. (1984). Reliability and discriminant validity of institutional integration scales for disadvantaged college students. Educational and Psychological Measurement, 44, 1051-1057.

These scales and the items comprising them are not copyrighted, but permission to adapt and use the items is given provided that neither you nor anyone else (including for-profit and not-for-profit organizations or institutions) derive any financial benefit from their use. Dr. Pascarella and I ask only that you acknowledge the source of the scales in your dissertation and any reports that you prepare and that you send us copies of any published journal articles based on these scales.

Thank you for your interest and good luck with your research.

Sincerely,

Patrick T. Terenzini

PTT/

An Equal Opportunity University

## APPENDIX B

### Institutional Integration Scale Survey

Name: \_\_\_\_\_

College: \_\_\_\_\_

Contact Information: \_\_\_\_\_

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#### INSTITUTIONAL INTEGRATION SCALE SURVEY

This survey is part of a study of retention factors on college students beyond their first year in predominantly white institutions and predominantly black institutions. The purpose of this survey is to select students for further study. Please identify your answers clearly by bubbling in the correct letter.

#### **Students' Pre-College Characteristics:**

##### **1. Gender:**

- ☐ (A) Male
- ☐ (B) Female

##### **2. Race/Ethnic Origin:**

- ☐ (A) African-American
- ☐ (B) Caucasian
- ☐ (C) Hispanic

##### **3. SAT Scores (Combined):**

- ☐ (A) 1600 -1200
- ☐ (B) 1199 – 900
- ☐ (C) 899 -500

##### **4. High School GPA:**

- ☐ (A) 4.0> Top 5 %
- ☐ (B) 3.0-3.9 Top 25%
- ☐ (C) 2.0-2.9 50%
- ☐ (D) <1.9 75%

##### **5. Parental Income:**

- ☐ (A) < \$30, 000
- ☐ (B) \$30,001 - \$60,000
- ☐ (C) \$60,001 - \$90,000
- ☐ (D) \$90,001 - \$120,000
- ☐ (E) \$120,001 - \$150, 000
- ☐ (F) 150, 001 >

##### **6. Parent's Education**

###### *Mother*

- ☐ (A) Gr. 1-5
- ☐ (B) Gr. 6-
- ☐ (C) Gr. 9-12
- ☐ (D) HS Grad.
- ☐ (E) Comm. Coll.
- ☐ (F) Bachelors
- ☐ (G) Adv. Degree

###### *Father*

- ☐ (A) Gr. 1-5
- ☐ (B) Gr. 6-8
- ☐ (C) Gr. 9-12
- ☐ (D) HS Grad.
- ☐ (E) Comm. Coll.
- ☐ (F) Bachelors
- ☐ (G) Adv. Degree

7. Classification:

- ☐ (A) Sophomore
- ☐ (B) Junior
- ☐ (C) Senior

8. Expected No. Informal Contacts with faculty:  
(Per month of 10 minutes or more outside class)

- ☐ (A) 16 or more
- ☐ (B) 11-15
- ☐ (C) 6-10
- ☐ (D) 1-5

9. No. of High School Extracurricular Activities:

- ☐ (A) 1-2
- ☐ (B) 3-4
- ☐ (C) 5-6
- ☐ (D) 7 or more

10. Initial Program of Enrollment:  
(Of two hours or more per-week on average)

- ☐ (A) Liberal Arts
- ☐ (B) Professional

11. Student's Highest Expected Academic Degree:

- ☐ (A) Bachelors
- ☐ (B) Masters
- ☐ (C) Ph. D.
- ☐ (D) Ed. D.
- ☐ (E) M.D.
- ☐ (F) J.D.

12. Choice Attending College:

- ☐ (A) 1<sup>st</sup>
- ☐ (B) 2<sup>nd</sup>
- ☐ (C) 3<sup>rd</sup>
- ☐ (D) 4<sup>th</sup>

13. Attending this University right decision:

- ☐ (A) Very Important
- ☐ (B) Important
- ☐ (C) Moderately Important
- ☐ (D) Unimportant

14. Importance of Graduating from College:

- ☐ (A) Very Important
- ☐ (B) Important
- ☐ (C) Moderately Important
- ☐ (D) Unimportant



	Survey Questions:  SOCIAL INTEGRATION FACTORS (SCALES 1-3)	Strongly Agree	Agree	Neither Agrees nor Disagrees	Disagree	Strongly Disagree
	Scale 1: Peer Group Interaction					
15.	Since coming to this university, I have developed close personal relationships with other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16.	The student friendships I have developed at this university have been personally satisfying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17.	My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18.	My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19.	It has been difficult for me to meet and make friends with other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20.	Few of the students I know would be willing to listen to me and help me if I had a personal problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21.	Most students at this university have values and attitudes different from my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Scale 2: Interactions with Faculty					
22.	My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23.	My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24.	My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25.	Since coming to this university, I have developed a close personal relationship with at least one faculty member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26.	I am satisfied with the opportunities to meet and interact informally with faculty members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Scale 3: Faculty Concern for Student Development and Teaching					
27.	Few of the faculty members I have had contact with are generally interested in students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28.	Few of the faculty members I have had contact with are generally outstanding or superior teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Survey Questions:	Strongly Agree	Agree	Neither Agrees nor Disagrees	Disagree	Strongly Disagree
29.	Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30.	Most of the faculty I have had contact with is interested in helping students grow in more than just academic areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31.	Most faculty members I have had contact with are genuinely interested in teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>ACADEMIC INTEGRATION FACTORS (SCALES 4-5)</b>					
	<b>Scale 4: Academic and Intellectual Development</b>					
32.	I am satisfied with the extent of my intellectual development since enrolling in this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33.	My academic experience has had a positive influence on my intellectual growth and interest in ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34.	I am satisfied with my academic experience with this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35.	Few of my courses this year have been intellectually stimulating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36.	My interest in ideas and intellectual matters has increased since coming to this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37.	I am more likely to attend a cultural event (for example, a concert, lecture or art show) now than I was before coming to this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38.	I have performed academically as well as I anticipated I would.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>Scale 5: Institutional and Goal Commitment</b>					
39.	It is important for me to graduate from college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40.	I am confident that I made the right decision in choosing to attend this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41.	It is likely that I will register at this university next fall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42.	It is not important for me to graduate from this university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43.	I have no idea at all what I want to major in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44.	Getting good grades is not important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Lastly, thank you for taking the time to answer these questions. Some of you will be selected for interviews.

## APPENDIX C

### Interview Follow-up Questionnaire

1. Why did you choose this university?
2. Why did you return after your freshman year?
3. What would have made you not return for another year to this university?
4. What has been the greatest influence on you at this university?
5. When did you know this was the correct university for you to attend?

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