

**USING MULTIVARIATE LOGISTIC REGRESSION ANALYSIS TO PREDICT  
BLACK MALE STUDENT PERSISTENCE AT A PREDOMINATELY WHITE  
INSTITUTION: AN APPROACH INVESTIGATING THE RELATIONSHIP  
BETWEEN ENGAGEMENT AND PERSISTENCE**

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## ABSTRACT

This study examined the impact of student engagement on persistence decisions of Black males attending a predominately White public institution in the South. The phenomenon of Black male student persistence at predominately White public institutions is multifaceted and complex. Many Black males enter predominately White campuses lacking the requisite background and experiences deemed necessary and important to student success and persistence. The role of improving persistence is shared by many with much responsibility placed on the students and the institution.

Upon entering a predominately White campus there are several institutional factors identified in research that play a critical role in student persistence. For the purposes of this study the factors influencing persistence are classified into Student Factors and Institutional Factors. Student factors are the dimensions of persistence over which the student has some degree of influence. Institutional factors are the dimensions of persistence over which the institution has control.

This study was designed to empower Black males attending Kappa University and to encourage them to take more of a commanding role in their persistence. Persistence of Black males is multidimensional and requires support from family, community, faculty, peers and administrators. The findings of this study identified the importance of student engagement on persistence decisions of Black males attending Kappa University. The results provide Black male students, faculty, and administrators with practical advice on how to improve the chances of persistence for this group.

## CHAPTER ONE

### INTRODUCTION

Student persistence is one of the most studied phenomena in higher education and continues to be a primary concern for colleges and universities (Flowers, 2004; Hood, 1992; Lundquist, Spalding, & Landrum, 2002; Swail, 2004; Metz, 2002; Tinto, 1993). Persistence of Black students in general and Black male students in particular, attending predominately White institutions (PWI) is one of the greatest challenges facing higher education institutions (Allen, 1985; Cuyjet, 1997, 2005; Gonsalves, 2002; Hefner, 2004; Holmes, Ebbers, Robinson, & Mugenda, 2000; Hood, 1992; Lang, 1992, June; Rice & Alford, 1989; Rowser, 1997). While recent trends indicate an increase in the number of Black students attending college, a troubling reality is that this population over all others also exhibits the highest propensity to leave college without a degree in hand (Davis, 1994; Harvey, 2003; Hefner, 2004; Holmes, Ebbers, Robinson, & Mugenda, 2000; Hood, 1992; Nora & Cabrera, 1996). The high propensity for Black students to leave college before earning a degree has societal implications due to the relationship between college degree attainment and occupational and economic attainment (Astin, 1999; Bowen & Bok, 1998; Carey, 2004; Cuyjet, 1997; Hefner, 2004; Nora & Cabrera, 1996; Pascarella & Terenzini, 1991, 2005).

Black males play a significant role in the slow erosion of overall Black student persistence (Cuyjet, 1997; Davis, 1994; Harvey, 2003; Hefner, 2004; *Journal of Blacks in Higher Education [JBHE]*, 2000-2001). Hagedorn, Maxwell, and Hampton (2001) and Hefner (2004) discovered that Black males are not only graduating high school at lower rates than any other group, but they are also entering college campuses and graduating at

much lower rates than any other group. African-Americans are the only racial group in which females appear to frequently attain greater rewards than males (Hagedorn, Maxwell, & Hampton, 2001; Hefner, 2004). The declining economic, social, and educational status of Black males is of concern as evidenced by the numerous discussions and debates on the need to improve the persistence and graduation rates of Black males (Cuyjet, 1997, 2006; Davis, 1994; Garibaldi, 1992; Hagedorn, Maxwell, & Hampton, 2001; Hefner, 2004; Hood, 1992; Nora & Cabrera, 1996). If college attendance and graduation is critical to a positive and rewarding future, the future of Black males is not very promising.

Garibaldi (1992) clearly articulates the plight of Black males in society:

One of the most actively discussed, and sometimes vigorously debated, issues since the late 1980s has been the declining social, economic, and educational status of young African-American males in our society. The negative indicators that describe a substantial share of this group's depressing condition in unemployment statistics, homicide rates (as both victims and perpetrators), their overwhelmingly disproportionate representation in the criminal justice system, as well as their last-place ranking on many measures of educational performance and attainment have become so commonplace that it has caused many to view the majority of these young men's futures as hopeless and impossible to salvage (p. 4).

The institution under study, hereafter referred to as Kappa University, is a public, research, four-year institution incorporating moderately selective admissions criteria. Students are granted favorable admissions decisions based on having first completed the state-mandated college preparation courses while in high school and either achieving an ACT composite score of at least 23 or a minimum high school cumulative grade point

average of 2.5. The higher education authority in the state requires all students seeking admission at either of the state’s public, four-year campuses to take college preparatory courses consisting of four units of English, three units of math, three units of science, three units of social studies, and four and one-half units of electives chosen from fine arts, foreign languages, speech, and computer science.

The persistence and graduation rates of Black males at Kappa University gives cause for concern. Table 1 provides a breakdown of the student populations by year of entry at the institution under study. It is very clear that Black and White students comprise over 95 percent of the incoming freshman class each year.

Table 1

Entering First-time, Full-time Freshmen			
	2003	2004	2005
Black male	191	214	217
Black female	287	281	346
White male	886	820	864
White female	1,088	1,153	1,076
International male	18	10	20
International female	11	10	12
Other minority male	47	51	54
Other minority female	35	53	60
Totals	2,563	2,592	2,665

Table 2 provides persistence rate information for Kappa University. Approximately 70 percent of Black males leave the institution by the seventh semester of enrollment.

Black males post the lowest persistence rates at the institution of all comparison groups. The six year graduation rates for Black males, Black females, White females, and White males are 16 percent, 32 percent, 47 percent, and 34 percent, respectively. Clearly, Black males are not persisting and graduating at the same rate as the other comparison groups.

Table 2

Persistence Rates by Semester						
	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Black male	85%	62%	59%	44%	43%	32%
Black female	88%	72%	60%	52%	51%	44%
White male	87%	70%	64%	56%	55%	50%
White female	90%	77%	71%	65%	64%	60%

Cuyjet (1997) identified a dilemma caused by the huge disparity between Black males and females in college attendance, persistence, and graduation rates. The low persistence rates of Black males in relation to Black females also has implications for the social status of Black males and may be detrimental to the traditional Black family structure (Cuyjet, 1997). The under-representation of Black men persisting and attaining college degrees results in a reduced pool of potential marriage partners for the steadily increasing number of Black females earning college degrees (Cuyjet, 1997).

Black males are leaving college without a college degree in hand at higher rates than any other group attending American colleges and universities (Harvey, 2003; Hood, 1992; Rice & Alford, 1989). Research aimed at predicting college success or better understanding why Black males exhibit low persistence rates has experienced limited success (Sherman et al., 1994; Townsend, 1994). Rowser (1997) found that commonly

used factors to predict academic performance, such as high school GPA and aptitude test scores, predict academic performance and persistence differently for White students than for Black students. Specifically, Cuyjet (1997) recommended adding a focus on behaviors and attitudes of Black males that may differ from other students, including Black females.

Metz (2002) commented that there are several theories purported to explain persistence and graduation rates of students in general, while there is limited research focusing primarily on the persistence of Black students. Rice and Alford (1989) clearly articulated the dilemma:

The issue of retention/attrition of Black students has increased not only because of the general decline in the number of Black students attending college, but also because of the shift of Black enrollment patterns from predominately Black campuses to predominately White campuses. The decline in Black student enrollment, coupled with the low retention and high-attrition rates poses serious problems for the Black community as it continues to strive for equality, greater opportunity, and progressive social in American Society (pp. 68-69).

Metz (2002) contended that because there is limited research focused on persistence of Black students, opportunities still exist to further extend the theories purported by well-published researchers of student persistence. Metz identified the need for research on student persistence incorporating race and gender, the interrelationship between social and academic integration and their impact on persistence, and the expansion of previous research on the involvement theory, initially purported by Astin, Spady, and Tinto, to include the influence of peers, faculty, and financial aid on student persistence. In an extensive review of relevant literature, I found very limited research that has been dedicated to and focused on incorporating Black males persisters and non-persisters in the

development of persistence models. Tinto (1993) further recommended more student persistence research investigating the relationship between learning and persistence. Research focused on better explaining why Black males persist or leave predominately public, White, research institutions is relatively non-existent and in high demand (Davis, 1994; Hood, 1992, Metz, 2002).

Gaining a deeper understanding into why an astounding number of Black males find themselves in the situation described by Garibaldi (1992) would benefit not only the Black male population, but the entire Black community and society in general. Earning a college degree is one of the solutions to improving the situation as described by Garibaldi (Astin, 1999; Cuyjet, 1997; Bowen & Bok, 1998; Pascarella & Terenzini, 1991, 2005; Robinson, 1990; Townsend, 1994).

Carey (2004) identified the importance of a four-year degree from a national standpoint. The United States has been the envy of many countries because of its productivity, largely attributed to its investment in higher education. An increasing percentage of future employment opportunities will require, at the minimum, a four-year degree. All other major countries included in Carey's study have made great strides in degree attainment rates, with the exception of one, the United States. The United States has, over the past 20 years, made minimal progress in degree attainment rates. Carey recommended a renewed focus on low-income and minority student degree attainment. If the United States is to remain competitive in an ever-expanding economy, there must be increased college attendance and improved graduation rates (Carey, 2004; Lotkowski, Robbins, & Noeth, 2004). Finding solutions to this dilemma will inevitably improve the plight of Black males, their contributions to society and the advancement of society.

## Background of the Problem

Higher education is important for many reasons. Exposure to higher education has many positive effects on students and several benefits to society (Astin, 1998; Bowen & Bok, 1998; Pascarella & Terenzini, 1991, 2005). Students who participate in higher education have a greater appreciation for other cultures and groups (Bowen & Bok, 1998). Exposure to higher education provides those who attend with the ability to view public issues from a long-term perspective; this perspective is not as evident in those who do not attend (Bowen & Bok, 1998). Having a long-term perspective in public issues allows public officials and others in positions of authority to make better policy decisions today that will impact citizens in the future. Participation in higher education increases the student's ability and capacity to learn (Astin, 1998; Tinto, 1993; Trow, 1997). Attending college creates students who have an affinity for life-long learning. Life-long learning and the interest and desire to learn are critical to staying current and relevant (Bowen & Bok, 1998). One great benefit of higher education is also an increased earning potential (Astin, 1998; Bowen & Bok, 1998; Pascarella & Terenzini, 1991, 2005). There is a direct positive correlation between educational attainment and earning potential. Earning potential increases as educational attainment level increases (Bowen & Bok, 1998). Increased education also improves efficiency and productivity (Bowen & Bok, 1998). Astin (1999) commented that society in general benefits not only by providing equal access to all citizens to higher education, but by increased participation in higher education.

Charles W. Eliot, former president of Harvard University, also identified the importance of higher education and its impact on improving the economic and social status of a race. Eliot spoke extensively on racial uplift and how a race in a state of dismay can advance to one of progression, prosperity, and respect. Wagoner (1997) articulated the

four essentials to racial uplift as stated by Eliot. Eliot strongly espoused the philosophy of education as critical and necessary for racial uplift. Du Bois (1903) also emphasized the importance of education, particularly higher education, in the uplift of the Black race. The educated among the race provide the leadership necessary for racial uplift. Williamson (1999) further added that Blacks view higher education as the most valuable means of improving their situation. A key strategy to changing the current status of the Black race, and particularly that of Black males, is by embracing the racial uplift philosophies of Eliot and Du Bois. Many of the issues Black males face are the result of economic deprivation. Hagedorn, Maxwell, and Hampton (2001) commented that issues of under employment and unemployment so prevalent among Black males can be remedied if there were more of a focus on postsecondary education.

Historically, Blacks in America have faced many challenges when trying to earn a college education. Wagoner (1997) found that Blacks were not initially welcomed on the typical Colonial American college campus. Black colleges were created exclusively to remedy this situation and serve the needs of Blacks desiring a college education. In the earlier years of American higher education Black colleges were responsible for graduating the vast majority of Blacks. The first Black to graduate from college occurred in 1826 at Bowdoin College. From 1826 through 1899 there were 2,304 Black college graduates. Predominately Black colleges graduated a total of 1,914 Black students, while predominately White colleges graduated 390 Blacks. Of the total graduates, 2,079 were Black males and 252 were Black females. The low female presence on the typical college campus was in part due to the fact that females were not encouraged to attend college. By 1920 women in general comprised 50 percent of all enrolled students. By 1940 women

comprised more than half of the total college enrollment. This increase mainly occurred as a result of most men being involved in the war effort (Wagoner, 1997).

Williamson (1999) discussed how segregation in higher education continued in the 1930s and 1940s. Blacks made many attempts to attend predominately White institutions, but to no avail. Two prevailing questions resonating with many were: Why do Blacks so desperately want to attend an institution that does not welcome them and is vehemently opposed to integration and the education of Blacks? Why not attend one of the historically Black colleges and universities where Blacks are welcome? The majority of Blacks wanted to attend a predominately White institution because of their superior academic reputation and prestige in relation to HBCUs. Blacks viewed a college education at a PWI as a means of gaining an advantage in their future career pursuits. Many Blacks also viewed the integration of predominately White institutions as their civic and moral duty. They felt it was their civic duty to force the institutions into being more inviting and responsive to Blacks. Many Blacks viewed attending a predominately White institution as a means of racial uplift. Black students would attend a PWI and receive a highly regarded, quality education and return to the Black community well equipped to help improve it (Williamson, 1999).

Black student attendance at predominately White institutions slowly increased during the 1950s. In 1954 only 4,000 of college freshman entering predominately White institutions were Black. In the 1960s the landscape of higher education in America changed dramatically because of two pieces of federal legislation. The Civil Rights Act of 1964 and the Higher Education Act of 1965 prompted increased attendance of Blacks at predominately White institutions. The Civil Rights Act of 1964 ordered each college campus to report enrollment data, identifying students by race or ethnicity. This

information revealed to the public and to the federal government the institutions that were not providing access to Blacks. The vast majority of Blacks students were from families at or below the poverty level, lacking the financial means to send their children to college. The Higher Education Act of 1965 remedied this situation by expanding the amount and types of financial aid available to citizens interested in pursuing a college education. Blacks benefited more than any other group from grants, low-interest loans, and campus work-study jobs. By 1970 approximately two-thirds of all Blacks attending college attended a predominately White institution (Williamson, 1999).

In 1980-81 academic year, 58 percent of Black college students were women. The percentage of Black women attending college increased to 63 percent in the 2000-01 academic year. In Bachelor's degrees conferred, the gap between women and men widened. Sixty-one percent of Bachelor's degrees awarded to Blacks in the 2000-01 academic year were earned by Black women (Harvey, 2003). The six-year graduation rate of Blacks in the 2000-01 academic year was 41 percent nationally, while White students posted a 61 percent graduation rate. Black women outpaced Black men by 11 percentage points (Harvey, 2003).

#### Purpose and Rationale of the Study

The purpose of this study is to investigate the relationship between the student engagement and student persistence for Black males attending a predominately White institution in the South. Kuh et al. (2005) defined student engagement as the "time and energy students devote to educationally purposeful activities in their efforts to succeed" (p. 8). The basis for student engagement as defined by Kuh et al. (2005) is grounded in what Chickering and Gamson (1987) defined as the Seven Principles for Good Practice in Undergraduate Education. These principles include cooperation among peers, active

learning, frequent and prompt feedback from faculty, student-faculty contact, time on task, respect for diverse ideas, talents and ways of thinking, and high expectations from faculty and administration.

I approach the concept of persistence by focusing on how students invest their time both on and off campus. This study examines student engagement in educational purposeful activities and its impact on student persistence. Students that are engaged tend to have positive learning experiences and are more likely to persist (Braxton, Milem, & Sullivan, 2000; Carey, 2004; Kuh et al., 2005; Tinto, 1993). My aim is to empower Black male students to take responsibility for their persistence. The purpose of the higher education institution is to help students become better-integrated with a sense of command over his destiny (Bowen, 1977). This study will result in creating a persistence model incorporating the degree of student engagement of persisters and non-persisters in educational purposeful activities.

Another major objective of higher education institutions is to develop and sustain high quality programs (Haworth & Conrad, 1997). Haworth and Conrad (1997) developed an engagement theory as an approach to accomplishing this goal. One of the critical requirements for high quality programs is to have diverse and engaged students. Haworth and Conrad (1997) defined diverse students as “students who have different perspectives and different points of views grounded in their racial, gender, ethnic, and socioeconomic backgrounds markedly enhancing the quality of student learning.” Black males are not persisting, and more importantly, not persisting long enough to reach graduation. As a consequence of low persistence rates, Black males’ contributions and perspectives are missing in many classrooms and discussions occurring on college campuses. The lack of

the Black male presence and their contributions in the classroom presents a challenge to institutions focused on developing and sustaining high quality programs.

Much of the persistence research places emphasis on factors and student characteristics proven to predict persistence and student success (Muraskin & Lee, 2004). Metz (2002) and Muraskin and Lee (2004) listed Tinto's (1993) model of student departure as one of the most cited in persistence literature. Tinto placed great emphasis on background factors such as socioeconomic background, parent educational level, college admissions test scores, high school grade point average, and courses taken in high school and their subsequent impact on student integration into the academic and social fabric of campus. I will extend Tinto's model by focusing more on admitted Black men and how their engagement impacts persistence.

Tinto (1982) emphasized the need for attrition studies that consider differences in disengagement by groups. Cuyjet (1997) concluded that many studies of student success primarily focus on disengagement by groups as it relates to race and do not particularly recognize the need to investigate differences in disengagement by gender within race. Current persistence models do not successfully identify and resolve persistence issues plaguing Black male students (Cuyjet, 1997; Guiffrida, 2005; Hood, 1992; Sherman et al., 1994; Tinto, 1983; Townsend, 1994).

One of the most salient features of the persistence and graduation data is the gender differences, particularly between Black males and females. I focus on Black males and not Blacks in general because of their low persistence rates and differences identified in research in how Black males and Black females negotiate the campus (Allen, 1985; Cuyjet, 1997; JBHE, 1994). Cuyjet (1997) found differences in the process of personal development between Black males and females. Black men and women differ in how they

socialize, make moral decisions, and process information (Cuyjet, 1997). The differences are exacerbated as Black men seek alternative ways of compensating for the differences.

JBHE (1994) extended the dialogue on differences between Black males and females. Black females leave the institution for reasons related to family and family commitment, while Black males leave more for the lack of academic commitment. Black females tend to spend more time engaging in academically related activities, while Black males tend to spend the vast majority of their time in more socially-oriented activities. Astin (1985) articulated that males listed boredom with the curriculum as the most common reason for dropping out of college, while females listed family responsibilities such as marriage and pregnancy as their most common reason for leaving college.

The study of Black males is critical because Black males exhibit the lowest persistence and graduation rates of all groups in American higher education and this trend currently shows very little indication of improvement on the horizon. The study of Black males at predominately White institutions is critical because the majority of Blacks enter PWIs as first-time matriculates. Current research places high importance on the initial institution attended and its influence on student persistence, educational aspirations, and eventual level of educational attainment. (Pascarella & Terenzini, 2005).

The study will empower Black males by informing them of the types of activities and engagement they should embrace to increase their odds of persistence. Additionally, the study will better inform institutions of higher education of how and where successful Black males spend their time, the types of activities they are engaged in, which will assist the institution in better allocating resources in areas that are of interest to Black males, thereby increasing their chances of persistence.

## Questions Guiding the Study

The study is guided by the following questions:

- 1) What are the differences in how Black Male Persisters and Non-persisters spend time on campus in student engagement activities?

### Hypotheses:

- A. There is not a difference in Library Usage between Black males who persist and those who do not persist.
- B. There is not a difference in Computer and Information Technology Usage between Black males who persist and those who do not persist.
- C. There is not a difference in Course Learning between Black males who persist and those who do not persist.
- D. There is not a difference in Writing Experiences between Black males who persist and those who do not persist.
- E. There is not a difference in Experiences with Faculty between Black males who persist and those who do not persist.
- F. There is not a difference in Art, Music, and Theater between Black males who persist and those who do not persist.
- G. There is not a difference in Campus Facilities Usage between Black males who persist and those who do not persist.
- H. There is not a difference in Clubs and Organizations involvement between Black males who persist and those who do not persist.
- I. There is not a difference in Personal Experiences between Black males who persist and those who do not persist.

- J. There is not a difference in Student Acquaintances between Black males who persist and those who do not persist.
  - K. There is not a difference in Scientific and Quantitative Experiences between Black males who persist and those who do not persist.
  - L. There is not a difference in Topics of Conversation between Black males who persist and those who do not persist.
  - M. There is not a difference in Information in Conversations between Black males who persist and those who do not persist.
  - N. There is not a difference in Reading and Writing between Black males who persist and those who do not persist.
- 2) What is the relationship between student engagement relative to Black males and student persistence at a predominately White university?
  - 3) What is the relationship between the traditional persistence predictors, student engagement, and student persistence relative to Black males at a predominately White university? Does the CSEQ improve the institution's ability to predict persistence of Black males?

#### Significance of the Study

A study of the persistence of Black males attending predominately White, four-year, public research institutions will expand current knowledge on student persistence in several ways. First, the study will add a focus on Black males with a primary goal of finding solutions to their low persistence rates at predominately White public institutions. Second, the survey instrument employed incorporates student engagement in educational purposeful activities. This information will be utilized to investigate the relationship between student engagement and persistence; this is a different and much needed approach to student

persistence studies because the focus is on what the student can do to take ownership of their success. Third, the study will compare and contrast Black male persisters and non-persisters to understand differences in engagement and its impact on persistence. Incorporating Black male persisters and non-persisters in persistence studies is relatively non-existent in current research.

#### Definition of Terms

**African American** and **Black** are used interchangeably to describe American citizens of African descent

**Cohort** – Students entering college during the same time frame (semester).

**College Activities** – Student quality of effort toward campus resources and opportunities for learning and development (Pace & Kuh, 1998).

**College Environment** – Student opinions about the priorities and emphasis of the campus environment (Pace & Kuh, 1998).

**Engagement** – The amount of effort students devote to educationally purposeful activities (Kuh & Hu, 2001).

**Estimate of Gains** – Student self-reported progress toward a diverse range of educational outcomes (Pace & Kuh, 1998).

**Non-Persisters** – Black male students included in the cohort not currently enrolled at the institution under study as of the spring 2006 census date (14<sup>th</sup> day of class).

**Persisters** – Black male students included in the cohort currently enrolled at the institution under study as of the spring 2006 census date (14<sup>th</sup> day of class).

## CHAPTER TWO

### REVIEW OF LITERATURE

Black males are graduating at lower rates than any other group (Bonner, 2003; Davis, 1994; Guiffrida, 2005; Harvey, 2003; Hood, 1992; JBHE, 2000-01). The Annual Status Report on Minorities in Higher Education, a report by Harvey (2003) for the American Council on Education, collected 2000-01 data covering several educational statistical categories from high school completion to college participation and graduation to employment in higher education. The findings support other research indicating White students continue to graduate at significantly higher rates than Black students. Thirty-seven percent of Black males between the ages of 18 to 24 are enrolled in college, while 42 percent of Black women in the same age group are enrolled. Whites posted 61 percent graduation rates, while Blacks posted 41 percent graduation rates, the lowest of all groups and equal to that of American Indians. The gap between completion rates of Black men and Black women continues to widen. Black women earned 61 percent of bachelor's degrees conferred to Blacks, while Black men earned 39 percent in 2000-01 (Harvey, 2003). The declining status of Black males in the social, economic, and educational arenas is one of the most actively discussed issues of the last few decades (Davis, 1994; Garibaldi, 1992; Harvey, 2003; Guiffrida, 2005).

This study investigates factors contributing to the early departure of Black males at a predominately White public institution. The review of literature provides a summary of relevant literature in relation to student persistence. The major themes, as illustrated in the concept map (see Figure 1), established by the study were how the Student Factors and Institutional Factors influence student engagement and how engagement influences

persistence. The review of literature is organized by Student Factors and Institutional Factors and identifies the important role each play in student persistence.

### Student Factors

Kuh et al. (2005) found that what students do while in college is the most important factor to student persistence. Students have the most important role in their persistence. Students must be willing, engaged, and involved participants to improve their chances of learning, persisting, and graduating (Astin, 1985; Kuh et al., 2005). As the literature illustrates, the Black male student's role in improving his likelihood of persisting ranges from being involved, actively seeking relationships with faculty, staff and other students, developing strategies for coping on a predominately White campus, having a realistic self-appraisal, seeking assistance when needed and seeking the needed financial assistance. This section is organized by student factors identified in the literature as critical to student success and persistence. The sections included are Background, Family, Peers, and Effort.

#### Background

Cabrera et al. (1999), Swail (2004) and Tinto (1993) emphasized the importance of background factors on student persistence. The researchers discussed extensively the important qualities and abilities the student brings to college and their ultimate impact on persistence decisions. Academic preparation is identified as critical to college adjustment and the ability to score well on college placement tests used by the vast majority of four-year colleges and universities (Cabrera et al., 1999; Hefner, 2004; Swail, 2004). Hefner (2004) and Swail (2004) discovered that the rigor of the high school courses and taking college preparation courses improves the student's chances of persisting.

Hood (1993) and Robinson (1990) continued the dialogue on the impact high school factors have on the future college performance of Black students. High school variables such as courses taken, school attended, high school grade point average, high school rank, and SAT scores were investigated to identify a relationship with college persistence. D'Augelli and Hershberger (1993) identified and discussed the differing predictive ability of SAT scores for Blacks and Whites. White students, on the average, score higher on SAT tests, while the college academic performance between the two groups is statistically equal. Of all high school variables studied, high school rank had the most statistically significant impact on predicting persistence, while SAT scores had the least; this was most evident for Black men (Hood, 1993).

Lang (1992) extended the academic preparation discussion by discovering a direct relationship between academic preparation and socioeconomic status. Students fortunate to grow up in higher socioeconomic status families have more access to the types of resources and educational development and opportunity to better prepare them to score well on standardized admissions tests and succeed in college. Swail (2004) contended that Black students are disproportionately represented in the lower socioeconomic status levels, therefore access to many development resources and opportunities are not as accessible to this group as they are to their White counterparts.

Hefner (2004), Rowser (1997), and Sedlacek (1983) also stressed the importance of preparation and awareness of academic ability on persistence decisions of Black students. Black students, on average, attending predominately White institutions have significantly lower pre-college preparation and less developed study habits than their White counterparts and consequently meet with less academic integration and lower persistence rates than other group in higher education (Nettles, Thoeny, & Gosman, 1986). Students must be

cognizant of their personal strengths and weaknesses relative to preparation for college. Successful minority students understand their deficiencies and work diligently to correct them (Sedlacek, 1983). A realistic self-appraisal enables the student to ascertain whether or not assistance is needed. Hood (1993) and Lundquist, Spalding and Landrum (2002) found that Black males in particular attributed their low persistence in part to the failure to avail themselves to the academic support services such as counseling and tutoring when needed. Unrealistic expectations will often lead to frustration when they are later perceived to be unattainable or will not provide the expected return on the investment of time, energy and resources. This frustration increases the probability of leaving college before goal completion (Rowser, 1997).

### Family

It is well documented that parents and family background play a pivotal role in the student success, particularly for minority students (Bonner, 2003; Guiffrida, 2005). Research has identified a strong correlation between socioeconomic status, family structure, encouragement from parents, academic and intellectual development, perceptions of discrimination, parental support and student persistence (Battle, 1998; Cabrera, Nora, Terenzini, Guiffrida, 2005; Lang, 1992; Nora & Cabrera 1996; Pascarella, & Hagedorn, 1999; Robinson, 1990; Teachman, 1987; Tinto, 1993).

Lang (1992) and Tinto (1993) found a direct relationship between socioeconomic background, institutional characteristics, and student persistence. There is a positive correlation between socioeconomic status and student persistence. Socioeconomic status has the same effect on Black and White students (Battle, 1998). Lang and Battle conducted a study to better understand why Black students were not as successful as White students in persisting until graduation. The study identified socioeconomic status as the most

important predictor of graduation. There was not a statistically significant difference in persistence and graduation rates between Black and White students when the effects of socioeconomic status were removed. One explanation provided was that Black students are more deprived of access to learning opportunities outside the classroom because a larger proportion of Black families reside in the lower socioeconomic status levels than other races. Academic preparation, proven in research to have a direct influence on student performance and persistence, is linked to financial resources and socioeconomic status (Battle, 1998; Lang, 1992, Swail, 2004, Teachman, 1987).

Robinson (1990) and Battle (1998) identified and expounded on the impact family structure and socioeconomic (SES) has on student persistence. The researchers studied Black students attending college in an attempt to identify critical factors and differences between those who persist until graduation and those who do not. Robinson identified a significant difference in family structure between persisters and nonpersisters. The vast majority of four-year graduates come from two-parent households, while 72 percent of those leaving college before graduation come from single-parent households. Battle went further to better understand the influence of single- versus dual-parent family structure on student success in college; the results of the study were mixed. In African American families, students from single parent, lower socio-economic status scored higher on standardized test and educational achievement than comparable SES students from dual-parent families. As SES increased, the trend reversed. Black students from dual-parent families in the higher SES levels scored higher than comparable Black students from single-parent families. The finding of the study is that family composition has very little impact on academic achievement. Battle commented that the focus of attention should be on correcting the disparities caused by SES.

Guiffrida (2005) found additional evidence of family importance to the persistence decisions of Black students attending predominately White institutions. The researcher discovered how persisters and high achievers valued family support differently than low achievers and non-persisters relative to Black students attending a PWI. Guiffrida (2005) found that successful Black students viewed family emotional and financial support as the most important asset in college. Black students who did not persist frequently listed the lack of support from their families as contributing to their attrition. This held true for students from families from all socioeconomic levels. Successful Black students would most often seek assistance and advice from family when faced with issues they could not resolve themselves.

Guiffrida (2005) also discussed the importance of family in providing financial support. Successful Black students mentioned the importance of support, no matter the amount, to their ability to focus on academically related activities. The support ranged from paying tuition to sending checks for spending money. The support allowed them to not have to seek gainful employment and permitted them to be more actively involved in activities outside the classroom. Unsuccessful Black students did not have this support and often credited the need to assist their families financially as the reason for leaving college. Many low achievers mentioned having to work exorbitant amounts of hours each week to cover educational and personal expenses. Successful Black students also discussed the family commitment to their success. Many spoke of being aware at a young age of the importance of a college education and that they no choice but to attend college.

### Peers

Students have a profound impact on the experiences and ability of their peers to persist (Astin, 1985; Bonner, 2003; Garibaldi, 1982). Peers can influence the student's

commitment to education and the time needed to be successful in college. Associating with peers focused on graduating college can have positive effects on the student's commitment and persistence. Holmes et al. (2000) further discussed the assimilation and acculturation of Blacks at PWIs. Black students who often socialize and associate with White students in activities labeled as non-Black or Black students who are very dedicated to excelling academically at the expense of Black group association may be perceived as abandoning their race or acting White. Pressure from Black peers to discontinue these behaviors and associations can be detrimental to their social and academic integration and ultimate success on the predominately White college campus.

The number of acquaintances and the types of interaction with acquaintances also affects the student's social experiences and the student's ability to persist. Too few and too many acquaintances can be detrimental to student persistence (Thomas, 2000). Interacting with students outside their normal peer group can have positive effects on academic performance and persistence. Interacting with other students who aspire to earn a college degree has a positive influence on student success (Pascarella & Terenzini, 1991). Peer pressure has a direct impact on student performance particularly for Black males (Bonner, 2003). Negative peer pressure tends to diminish the academic performance of Black males (Bonner, 2003; Garibaldi, 1992).

Fisher and Hartmann (1995) concluded that Black students more than White students viewed interracial experiences as very important for future well-being and success. Black students felt that their experiences on a predominately White institution better prepared them for real life. Black students have a more difficult time getting acquainted with White students due to race. These experiences, coupled with the campus climate, negatively heightened their racial self-consciousness and can have a detrimental affect on persistence

(Fisher & Hartmann, 1995; Moxley, Najor-Durack & Dumbrigue, 2001). Nora and Cabrera (1996) clearly articulated the effects White students have on the ability of Black students to persist on a predominately White campus. Black students are more prone to experience distant relationships and encounter racial ignorance on the part of White students. This negative experience can make the college campus appear larger and more impersonal. With the low percentage of Blacks on a predominately White campus, this situation can exacerbate the sense of alienation and disconnection from mainstream campus as expressed and experienced by Blacks. In their study of Blacks and their experiences on PWIs, D'Augelli and Hershberger (1993) discovered that the vast majority of Blacks are exposed to hearing disparaging remarks about Black students, while the vast majority of White students never hear such remarks. The vast majority of harassment experienced by many Black students is verbal harassment. This situation can be remedied when Black students are able to establish positive relationships with their peers (D'Augelli & Hershberger, 1993).

Thompson and Fretz (1981) identified strategies and methods of predicting the social adjustment of Black students attending predominately White universities. Success in college requires the admitted student to become both academically and socially integrated (Thompson & Fretz, 1981; Tinto, 1993). Integration requires the student to develop skills for interacting with other cultures. Black students on a predominately White campus must develop skills for interacting with the White culture. The optimal approach is for Black students to remain connected to the Black community while simultaneously learning the stimuli uniquely relevant to successfully engaging with the White community (Thompson & Fretz). Black students able to successfully balance between the two cultures develop negotiation skills critical to success in life. The Black student must approach the

environment at a PWI with a cooperating attitude and approach that will ultimately create a more positive environment for sharing and learning from others (Thompson & Fretz).

Thompson and Fretz found that Black students have more access to avenues of coping socially than academically. Coping socially is more of a factor that Black students can initiate and determine the discourse. A cooperating approach will lead to more positive interactions, fruitful engagements, increase the opportunities and probability for academic and social growth and increased persistence (Tinto, 1993; Thompson & Fretz, 1981).

### Effort

Astin (1985) and Kuh (2001) spoke extensively about student involvement and its impact on many aspects of the student's college experience. Astin and his theory of student involvement postulated that students that invest time in learning activities and are actively engaged in the social and academic dimensions of campus are more likely to develop, have positive experiences on campus and persist.

Astin (1985) and Tinto (1993) offered the advice of getting involved on a college campus. Involvement can range from joining a club or organization to attending events sponsored by the institution. Involvement is one avenue for the students to form relationships that will both serve as encouragement and support for student persistence (Kuh, 2001). Involvement, as defined by Astin (1985) and Kuh (2001), ranges from the student's place of residence, joining social fraternities and sororities, participation in extracurricular activities, participation in ROTC, participation in an Honors program, participation in undergraduate research, involvement in student government, academic involvement and having an on campus, or a part-time job, just to name a few. All of these different types of involvement require the student to spend more time on campus and

become more connected to campus, faculty, other students, and staff. Spending more time on campus and becoming connected to campus will improve persistence (Astin, 1985).

### Institutional Factors

Astin (1985), Kuh (2004), Pascarella and Terenzini (1991, 2005) and Tinto (1993) spoke extensively about the important role the institution plays in student persistence. As Tinto (1993) pointed out, the institution must recruit to retain and graduate students. This process involves being aware of the prospective student's expectations of college and his or her academic goals. Persistence is optimized when congruence between the student's expectations and goals match with the institution's mission and ability (Tinto, 1993). Kuh (2004) further elaborated on the important role of the institution as a provider of the necessary resources, programs, and services deemed necessary to create an atmosphere conducive to student development and success. This section focuses primarily on the institutional factors that play a major role in student persistence. This section is organized by faculty, support, financial aid and environment.

#### Faculty

Bonner (2003) found that regardless of academic preparation and intellectual ability, all students benefit from meaningful relationships with faculty. There are many aspects of the student-faculty interaction and relationship that is important to student success, including pedagogy utilized by faculty and their interaction with students both inside and outside the classroom (Bonner, 2003; Braxton, Milem, & Sullivan, 2000; Gonsalves, 2002; Holmes et al., 2000; Umbach & Wawrzynski, 2004). Thomas (2000) and Zhao and Kuh (2004) investigated the applicability and success of several programs designed to connect students and their impact on student persistence. Connecting students with different life

experiences enhances the learning environment and improves persistence and satisfaction with the campus environment. Faculty attentiveness to student's needs, being approachable, and returning phone call and e-mails are all important to student persistence. Black students, particularly Black male students, earned higher grades when a favorable relationship with faculty was established (Allen, 1985; Bonner, 2003; Gonsalves, 2002).

Cabrera et al. (1999), Holmes et al. (2000), Lundquist, Spalding, and Landrum (2002), Nettles et al. (1986), Rice and Alford (1989), Tinto (1993) and Umbach and Wawrzynski (2004) also identified the important role faculty and classroom experiences play on Black student persistence. Academic integration and the student's ability to perform well in the classroom have an impact on the student's decision to persist. Braustein, McGrath, and Pescatrice (2000) further identified the relationship between academic performance and subsequent enrollment. Poor performing students tended to not enroll in subsequent semesters. Faculty, to a large extent, control what happens in the classroom (Braustein, McGrath, & Pescatrice, 2000). They have a direct and indirect impact on learning and development that occurs inside and outside the classroom.

Kobrak (1992) found that the student's perceptions of faculty attitudes and behaviors influence academic integration. Informal contact with faculty was significantly more important than formal, in-class contact. Black students also acknowledge the importance of interacting with faculty inside and outside the classroom and how it motivates them to persist (Douglas, 1998; Kobrak, 1992; Pascarella & Terenzini, 1991). The relationship outside the classroom does not necessarily have to be fact-to-face. Lundquist, Spalding, and Landrum (2002) discovered an important relationship between the returning of phone calls and e-mails by faculty and student persistence. Kobrak further commented that "the reason that the faculty member and Black student must work together is that the education

of any student ultimately rises and falls on the teacher-student relationship inside and sometimes outside the classroom” (p. 516). The student’s perception of faculty concern for their well-being is more important than the actual frequency of interaction between faculty and students. Gains in quantitative skills and analytical thinking for Black and White students were equally attributed to positive interactions with faculty, positive experience with peers, and prior academic ability (Tinto, 1993).

Nora and Cabrera (1996) and Townsend (1994) extended the dialogue on the important role of faculty in persistence decisions of minority students. Minority students are more prone to experience distant relationships with faculty, lack of support services and problems with the curriculum than White students. Nora and Cabrera discovered that minority students are more likely than non-minority students to encounter discriminating practices, sense prejudice from faculty and staff, report negative in-class experiences, and enter college in need of remediation to successfully engage with a rigorous college curriculum. How Black students are perceived and treated by faculty plays a major role in how well Black students overcome these types of negative experiences. Townsend cited problems such as faculty mannerisms, faculty behavior toward Black students, explicit racial remarks, and the non-recognition of Black students in the classroom setting for contribution to the learning are all barriers to the academic success of Black students.

Gonsalves (2002) offers practical advice to White faculty when advising and teaching Black male students. Gonsalves (2002) articulated the need for clear communication between Black male students and White faculty as it relates to academic expectations, particularly in written assignments. The first real opportunity for interaction between Black male students and White faculty is after the first written assignment is submitted. Gonsalves (2002) found that many minority students and Black males in particular tend to

struggle to meet the academic requirements of written assignments. White faculty must approach this dilemma with caution. The most successful solutions have been to first establish a relationship with the Black male student. This relationship will provide White faculty with access to the student's background and enable them to offer suggestions on how to improve their writing without seeming unfair or as a racial issue.

Additionally, Zhao & Kuh (2004) identified the important role faculty and pedagogy play in student success. The faculty's approach to teaching and learning determines how much the student will learn. Learning communities present faculty with an avenue for actively engaging students in learning. Students are co-enrolled in two or more courses with the intent of intensifying the discussions and engaging students in academic discourse both inside and outside the classroom. Instead of faculty merely transmitting information, students actively construct and assimilate knowledge; the result is students attain a much deeper level of learning and learning that is more personally relevant. Teaching and learning strategies bringing students together to complete projects improves cognition and learning. Collaborative and cooperative teaching and learning strategies can successfully promote understanding, tolerance, student satisfaction with the learning environment and persistence (Zhao & Kuh, 2004).

Garibaldi (1992) extended the dialogue by articulating the important role faculty play in remedying many of the adjustment issues faced by Black males. Although the study was conducted in a secondary school context, the advice may play a role on the college campus. The effects of peer pressure, particularly negative peer pressure proven to diminish the academic performance of Black males, can be remedied if academic excellence is given the positive attention it deserves by verbally and materially rewarding Black males students performing well academically (Garibaldi, 1992). Positive recognition can help raise the

Black males self-esteem, academic confidence, and self-concept. Faculty play a critical role in fostering academic excellence in Black males. The faculty's treatment of Black male students must be positive, supportive, and encouraging. Faculty must challenge Black male students to perform at their best and provide them with immediate and continuous feedback. Teachers and parents must work collaboratively to create a learning environment conducive to learning. Teachers must learn to better communicate with parents encouraging them to get involved in their son's learning.

Robinson (1990) further discussed the important role faculty can play in easing the transition for students from high school to college. Robinson found that academic difficulty during the first year had the most influence on the student's decision to stay or leave. Students will persist if faculty provide careful instructions that include a program of teaching and learning that deals directly and efficiently with the needs of students in a firm and supportive way and a competent faculty interested in teaching students rather than just teaching subjects.

Kobrak (1992) also discussed the importance of White faculty engagement in working with Black students on predominately White college campuses in efforts to improve Black student persistence. Many Black students entering predominately White institutions have experienced poor academic preparation for college. Most often the work of nurturing and mentoring Black students on a predominately White campus is left up to the hand full of Black faculty (Townsend, 1994). The need for sympathetic White faculty to assist in the academic integration of these students is paramount. Successful strategies designed to assist Black students in better persisting do not embrace methods or practices of reducing academic standards or expectations of Black students. The key to successful academic integration of Black students is developing teaching strategies that "accommodate the

strengths and weaknesses of more diversely prepared learners” (Kobrak, 1992). Kobrak further articulated the type of faculty needed to bring about increased Black student persistence. Faculty must believe that Black students can learn, take time to learn about minority culture and family, and include this perspective in the learning environment. Improved academic achievement is the foundation of student success. Faculty must demand high academic standards and be willing to invest time to assist Black students in meeting these standards (Kobrak, 1992).

Sedlacek (1983) delved deeper into the important role faculty play in minority student success on predominately White campuses. Sedlacek conducted a study in which he interviewed graduating minority seniors at a PWI and discovered how students valued and credited their relationship with faculty as the most important factor assisting them in graduating from college. Factors such as positive self-concept, understanding and dealing with racism, realistic self-appraisal, preferring long-range goals to short-term or immediate needs, availability of a strong support person, successful leadership experience, and demonstrated community service were all important to minority student persistence.

Faculty are most critical in the minority student’s self-concept (Sedlacek, 1983). Yet, some faculty have a tendency to expect less of Black students than White students. If faculty expect less of Black students they will not perform at their potential. If faculty expect Black students to perform well, the students will meet or exceed their expectations. At the same time, faculty must be careful to not be particularly critical or overly laudatory of expectations of minority student’s performance. Either of these approaches can negatively impact the minority student’s self-concept (Sedlacek, 1983). Research has proven that minority students apprehensively approach faculty, especially White faculty (Sedlacek, 1983). This makes it most critical that faculty initiate contact with minority

students with the goal of advising and educating them on how to better deal with academic and non-academic matters and situations. Sedlacek emphasized the important role faculty play in assisting students to better understand how to navigate the higher education system and reach graduation.

Muraskin and Lee (2004) conducted a study that shed more light on how to increase the persistence rates of students from low socioeconomic backgrounds. This study was germane to Black student persistence because Blacks are disproportionately represented in the low socioeconomic status level (Muraskin & Lee). Muraskin and Lee discovered that students who receive clear academic goals are more likely to persist. Clear academic and career goals can be established by academic advising, academic counseling, mentoring programs, and other forms of support from college personnel. Muraskin and Lee further commented on the importance of faculty and what they do inside the classroom. No matter how good the support services or financial aid, the quality of instruction is a crucial element in the college experience. Other means of academic support includes scheduling students in blocks and learning communities. Both methods include enrolling students in like classes as a way of encouraging group discussions and engagements outside the classroom.

### Support

Zhao and Kuh (2004) spoke extensively about learning communities and their impact on both the social and academic domains. Learning communities are a method of connecting students to each other for academic and social development. Students generally co-enroll in two or more courses requiring extended engagements in common intellectual activities. Most often the learning community requires investment of time outside the classroom. These activities are positively linked with increased academic effort, promoting

openness to diversity, social tolerance, personal and interpersonal development, and persistence.

Holmes et al. (2000) discussed factors that contribute to the low persistence rate of Blacks attending PWIs. The researcher created a formula that suggests that the student's behavior or decision to persist or leave is a function of the interaction of the student and the institutional environment. Black students tend to leave the PWI when they feel alienated and isolated, have deficient academic preparation to successfully engage with the rigorous college curriculum, have insufficient financial resources, have low self-esteem, have family concerns interfering with the student's ability to focus on college, have limited exposure to the majority group, have language barriers, and were victims of poor academic advising in high school. Institutional characteristics that contribute to the low persistence rates of Blacks attending PWIs is the dominance of an Anglo-European teaching philosophies, the absence of minority role models, the lack of faculty and peer involvement, an hostile and unfriendly campus environment, the lack of multicultural programs and activities, faculty and staff having low expectations of minority students, institutional abandonment, and subtle and overt racial discrimination.

Lang (1992) emphasized the need for changes in the attitudes of those in control of higher education change for improvements in Black student persistence to become a reality. These necessary remedies are not currently available on a typical college campus, not even for White students (Lang, 1992). JBHE (2000-2001) discovered that PWIs experiencing the most success in keeping Black students on their campus until graduation have developed programs to assist Black students to better persist. Programs such as freshman orientation, freshman seminars, learning communities, mentoring and supplemental instruction help Black students to better adjust to the predominately White

campus environment and increase learning (Thomas, 2000; Tinto, 1993, Smedley et al., 1993; Terenzini, Cabrera, Colbeck, Bjorklund & Parenta, 2001).

### Financial Aid

The role of financial assistance on persistence is well documented (St. John, 2000; Muraskin & Lee, 2004). Financial aid can be a detriment to student persistence, particularly for minority students who are, as a group, disproportionately represented in the lower socioeconomic status (Hu & St. John, 2001; JBHE, 2000-2001; Muraskin & Lee, 2004).

Financial aid plays an important role in Black student persistence decisions. Hu and St. John (2001) articulated the relationship between persistence decisions and financial assistance, particularly for Black students. The most important factor in achieving high Black student persistence and graduation rates is the availability of financial aid (JBHE, 2000-2001). The number one reason Black students leave college is money related. Institutions with the highest Black student graduation rates were also institutions that were financially able to provide financial assistance to Black students. Many Black students leave college prior to earning a college degree because of the need to assist their families financially (JBHE, 2000-2001, Hu and St. John, 2001).

An explanation for the low graduation rates of Blacks at HBCUs is that the vast majority of students attending HBCUs are from low-income families. The lack of large endowments and financial assistance causes the majority of Black students to leave HBCUs without a degree in hand (JBHE, 2000-2001).

Nora and Cabrera (1996) also identified a relationship between financial aid and Black student persistence. They argued that problems more prevalent among minority students

than non-minority students, such as financial aid problems, impede their academic and social success and integration.

Lang (1992) extended the discussion on the importance of financial aid in assisting Black students in their endeavor to persist. The study explored recent trends occurring at secondary and post-secondary institutions in an effort to better explain why Blacks are not as successful in the higher education environment as other groups. There was not a significant difference between the attrition rates of Black and White students when socioeconomic factors were controlled. Institutional factors are the main contributing factors to attrition rates. Lang lists academic preparation, financial resources, and institutional barriers as the main contributors to the declining number of Blacks attending and graduating college.

Robinson (1990) further investigated Black student success and identified the importance of financial aid to persistence. The researcher stated what is missing in current literature on persistence is the absence or neglect of the factors affecting persistence of this group to graduation. The availability of financial aid, especially after the third year of enrollment, was also a factor in the decision to stay or leave. Seventy-two percent of students leaving college after the third year came from single-parent households. Having the financial means to persist was their major hurdle.

Within-year persistence is also impacted by the availability of financial assistance (Astin, 1985; Hu and St. John, 2001). Hu and St. John (2001) studied the within-year effects of financial aid because within-year persistence is an appropriated outcome measure when making an assessment of the effects of financial assistance. The researcher discovered that Black students who were recipients of grants and loans were more likely to

persist than Black students receiving no financial aid, while Black students receiving grants only or loans only persisted as well as Blacks receiving no financial assistance.

Astin (1985) found that students with part-time, on-campus jobs as opposed to off-campus jobs are more likely to persist. Blacks were more likely to be recipients of financial assistance than White students. Another finding of the study revealed that Blacks had the same probability of persisting as Whites when controlling for other variables. This finding further stresses the impact of financial aid on persistence decisions of Black students. The availability of financial aid has much more of an impact on persistence for Black students than White students.

### Institutional Environment

Astin (1985) described the major role the institution plays in student persistence. The institution has both a vested interest in improving student persistence and an obligation to finding ways to assist students in better persisting. Blacks are more likely to persist at Black colleges than PWIs. This has been mostly credited to a more inviting, collegial environment. The size of the institution in relation to size of hometown can play a role in student persistence. Students from small towns are more likely to persist at small colleges than large colleges, as the size of institution plays an important role in the student's ability to identify with the institution (Astin, 1985).

Bonner (2003) identified the important role the campus environment plays in student development and persistence. Baker and Valez (1996) and Davis (1994) attempted to better understand how the college campus environment and institutional type affects success of Black students. The researchers conducted similar studies comparing Black students attending historically Black institutions with Black students attending predominately White institutions. Of the two institutional types, HBCUs have the most

positive effect on students of color (Baker & Valez, 1996; Davis, 1994; Pascarella & Terenzini, 1991; Thompson & Fretz, 1991). This is particularly true for Black men (Pascarella & Terenzini, 1991). Black students attending HBCUs report higher academic achievement, greater social involvement, higher occupational aspirations, and improved persistence (Astin, 1985; Baker & Valez, 1996; Pascarella & Terenzini, 1991).

Thompson and Fretz (1991) attempted to better understand and explain why Black students attending HBCUs appear to experience more gains in critical aspects of student development than Blacks attending PWIs. Black students attending and graduating from PWIs experience lower levels of intellectual and psychosocial development than Black students who attend and graduate from HBCUs. Black students tolerate the environment and situations at predominately White institutions and are not fully engaged in the growth and development experience expected in a college education (Thompson & Fretz, 1991). Davis (1994) discovered that Black males attending PWIs report experiencing “more negative feelings and unhappiness about college life, feel they are often unfairly mistreated, experience academic demoralization, and think less of their academic ability” (p. 627). Black students perform better at HBCUs because they feel valued, accepted, and socially connected. They better exhibited all of the characteristics of being socially and academically integrated which are proven determinants of persistence.

Smedley, Myers and Harrell (1993) discovered that students in general encounter varying degrees of stress on the typical college campus, which can be detrimental to student success and persistence. Student stresses range from academic demands, relationship problems to financial problems. Smedley, et al. stated that many of the causes of stress for minority students can be remedied by institutional intervention. Minority students attending predominately White institutions experience additional stresses such as

experiences with racism and discrimination, being questioned about belonging on campus, and difficulty interacting with peers and faculty (Nettles et al., 1986; Nora & Cabrera, 1996; Smedley et al., 1993). These stresses, termed “minority status stresses”, further impede successful adjustment to college for minority students (Smedley et al., 1993). Black students reported significantly higher minority status stress of all minority student groups attending college. Psychological stresses are not as important in explaining current academic performance as prior academic preparation and performance; however, the added stress experienced by minority students heightens the likelihood of poor academic performance (Smedley et al.).

In related research, Douglas (1998) and Rice and Alford (1989) investigated the relationship between perceptions of prejudice and discrimination and the adjustment of Black students to predominantly White college campuses. The experiences of Black students and their perceptions of prejudice may lower the quality of their college experiences. While experiencing discrimination has a negative effect on both Black and White students, Black students attending a predominately White campus are more likely to encounter discriminating practices, sense prejudice from faculty, staff and other students and report negative in-class experiences (Fisher & Hartman, 1995; Nora & Cabrera, 1996).

Cabrera et al. (1999) also found a relationship between student exposure to prejudice and discrimination and institutional commitment for Black students. Constant reminders of being Black on a predominately White campus can make a campus seem larger and impersonal. Situations such as the under representation of Black students on campus and encountering racial ignorance on the part of White students and faculty reminds students of their minority status on a predominately White campus. These experiences create stress for

minority students and can create barriers to full integration into the campus (D'Augelli & Hershberger, 1993; Douglas, 1998).

Baker and Valez (1996) and Davis (1994) attempted to better understand how the college campus environment and institutional type affects success of Black students. The researchers conducted similar studies comparing Black students attending historically Black institutions with Black students attending predominately White institutions. Of the two institutions types, HBCUs have the most positive effect on students of color (Baker & Valez, 1996; Davis, 1994; Pascarella & Terenzini, 1991; Thompson & Fretz, 1991). This is particularly true for Black men (Pascarella & Terenzini, 1991). Black students attending HBCUs report higher academic achievement, greater social involvement, higher occupational aspirations, and improved persistence (Astin, 1985; Baker & Valez, 1996; Pascarella & Terenzini, 1991).

Thompson and Fretz (1991) also discussed differences in the campus environment on predominately White and predominately Black campuses. Black students attending HBCUs appear to experience more gains in critical aspects of student development than Blacks attending PWIs. Black students attending and graduating from predominately White institutions experience lower levels of intellectual and psychosocial development than Black students who attend and graduate from predominately Black institutions. Black students tolerate the environment and situations at predominately White institutions and are not fully engaged in the growth and development experience expected in a college education (Thompson & Fretz, 1991). Davis (1994) discovered that Black males attending PWIs report experiencing “more negative feelings and unhappiness about college life, feel they are often unfairly mistreated, experience academic demoralization, and think less of their academic ability.” Black students perform better at HBCUs because they feel valued,

accepted, and socially connected. They better exhibited all of the characteristics of being socially and academically integrated, which are proven determinants of persistence. Astin (1985) articulated that males listed boredom with the curriculum as the most common reason for dropping out of college, while females listed family responsibilities such as marriage and pregnancy as their most common reason for leaving college.

### Summary

An analysis of the literature as it relates to student persistence and success identifies the important roles the student and the institution play in student persistence. Student factors such as parental influence, preparation for college, student involvement and effort, and peers are important to student persistence. The institutional factors include the important role of faculty, programs and support to students provided by the institution, financial aid, and promoting a campus environment that is supportive and inviting to all students, and for the purposes of this study, Black males, are important to student persistence.

How Black students are treated and their perception of their acceptance on a predominately White campus impacts their integration into the campus. Establishing bonds with other students, particularly other Black students, has proven to be one means of coping on a campus that does not reach out to minority students in an attempt to make them feel welcomed and valued. Students being connected to other students who are well connected have proven to improve the social integration process. Too many acquaintances can prove to be detrimental to persistence. The Black student's perception of how faculty feel about them is critical to their success and integration. Students must feel that faculty value their opinions and existence on campus and in their classroom. Interaction with faculty outside of class has proven to be more important to improving the student's

perception of how faculty value them than in-class interaction. Family ties are very important to Black students. Black students will often initially turn to family members for advice and assistance when they are experiencing difficulty in college. Family members must find ways to connect the student to campus and faculty and administrators on campus that can assist them in times of difficulty. Campus administrators must be aware of the family bond for this group and seek opportunities to establish a relationship with the Black student's family.

Preparation for college plays a significant role on future academic performance. What happens in the high schools and how colleges and universities provide support for poorly prepared students are determinants of college success. What is most important in faculty and student interactions is the student's perception of sincerity and care for their success in faculty. Faculty must expect the same of Black students as they do of other students, while providing the support to assist Black students and other students in meeting and exceeding their high expectations. There must be more of a focus on the individual than a one-size-fits-all approach to teaching and learning.

There is a marked disparity in persistence and graduation between students from families in high socioeconomic status and students from low socioeconomic status families. One widely accepted explanation is that parents that earn more are usually more educated and are cognizant of the types of courses and programs their children should be involved in to improve their chances of success. They can also better afford to enroll their children in these programs and courses. Family also serves as emotional support for Black students in times of difficulty in college.

Black males are persisting and graduating at lower rates than any other group. There are many strategies utilized by institutions across the nation to improve persistence and

retention of minority students and Black males are still not persisting at the same rates as other groups. Black males must take more responsibility for their success. Faculty must realize the important role they play in student success. How willing and able the institution is in meeting the demands and needs of Black male students and the willingness and ability of the Black male students to adjust to the expectations of the college environment is part of the perplexing problem for improving the persistence of Black male students. This study will identify factors related to investment of time in educational purposeful activities that are important to Black male student persistence at a predominately White public four-year institution in the South.

### Conceptual Framework

The conceptual framework is framed by Tinto's (1993) model of student integration, and Astin's (1985) model of student involvement. The conceptual framework for this study is graphically depicted in Figure 1. The student factors include background information and aspects of persistence over which the Black male student has some degree of control over. The institutional factors include aspects of student persistence that are primarily under the control and responsibility of the institution. Student factors and institutional factor have a collaborative impact on student engagement and subsequent persistence. The diagram purports a longitudinal aspect of engagement and persistence. Students are faced with the decision to continue or leave the institution at different times during their college career. Institutional factors and students factors may have differing effects on persistence decisions depending on where the student is in the development process. My study primarily focused on the impact of student factors and institutional factors on student engagement and subsequent impact on student persistence decisions of Black males attending Kappa University.

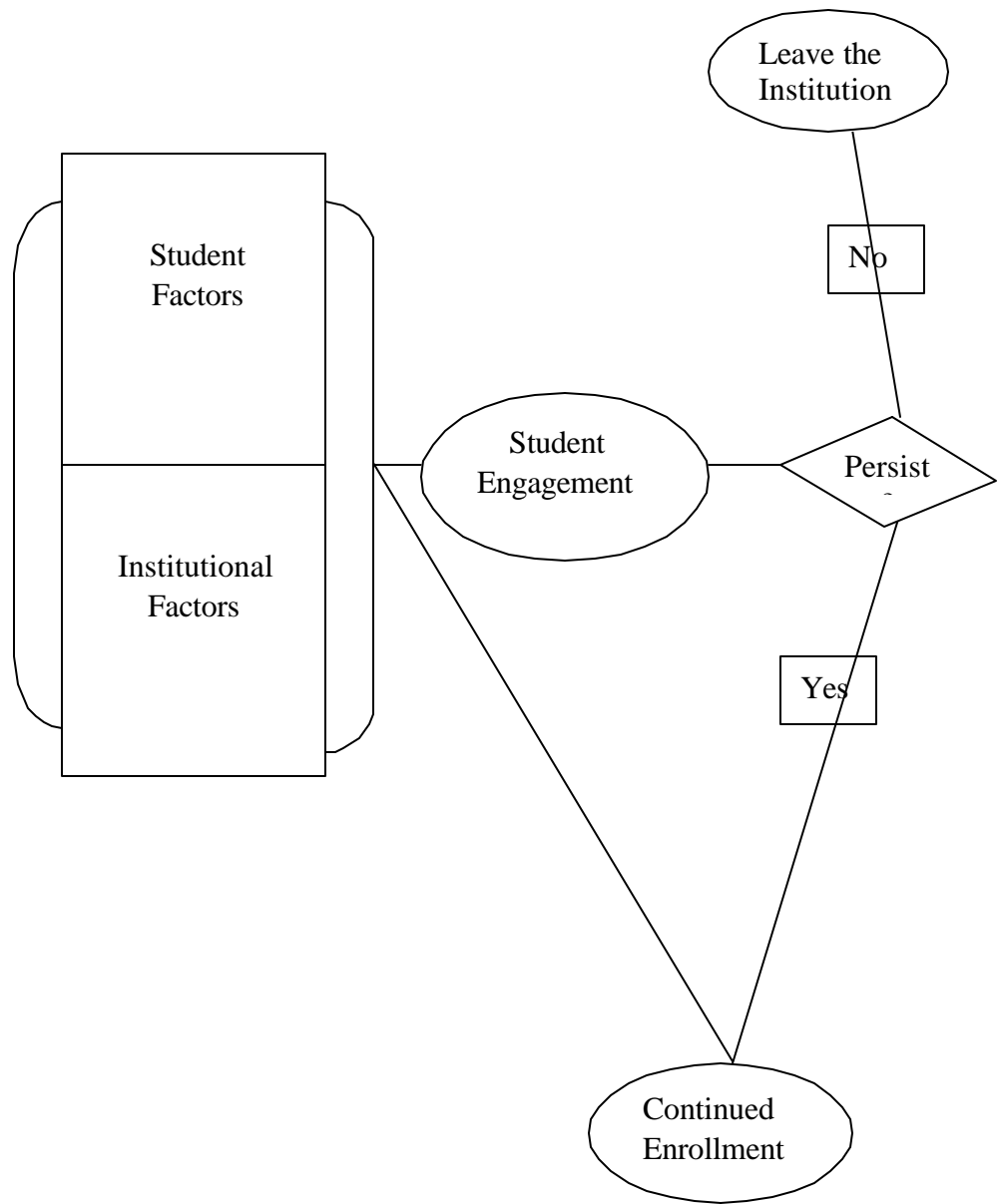


Figure 1: Description of the Conceptual Framework

Description of the Conceptual Framework

## CHAPTER THREE

### METHODOLOGY

The purpose of this study is to investigate the relationship between the student engagement and student persistence for Black males attending a predominately White institution in the South.

#### Research Design

For the purpose of this study the outcome variable is persistence. Because persistence is considered to be a dichotomous variable, meaning there are two possible outcomes, I employed the appropriate regression method. Pedhazur (1997) discussed the applicability of using regression analysis when the objective of the study is to better understand how a set of descriptors explains an outcome. Menard (2002), Pampel (2000) and Pedhazur (1997) recommend using logistic regression analysis when the dependent variable is dichotomous. Logistic regression will assist me in better understanding the relationship between a set of independent variables (continuous and/or categorical) and the dichotomous dependent variable.

Nora & Cabrera (1996) commented that conducting the study on one campus as opposed to multiple campuses controls for several threats to internal validity. Students on one campus are more likely to be exposed to similar campus conditions such as course requirements, faculty, and academic staff with whom they must interact, and with other institutional elements and conditions (Nora & Cabrera, 1996).

#### Participants

Creswell (2002) listed probability sampling as a selection process where the researcher selects individuals from a particular population that are representative of that population.

Probability sampling allows the researcher to make generalizations to the population based on a study of a sample. Random sampling is the most rigorous and most popular form of sampling from a population (Creswell, 2002). Following the advice of Creswell I used Stratified Random Sampling because I wanted to first identify Black males meeting the characteristics of the defined cohort. I stratified the population of Black males by persisters and non-persisters and randomly selected Black males in proportion to their representation in the total Black male population.

### Sample Size

Sample size is a very important aspect of any study (Peng et al., 2002). Pedhazur (1997) states that deciding sample size should follow good research practice taking into consideration the preferred effect size and power of the statistical test of significance.

Peng et al. discovered that there was very little guidance in relation to sample size for logistic regression analysis. Because I employed Maximum Likelihood in my study, there are two recommendations I incorporated in the study. Several researchers recommend a minimum sample size of 100, while many recommend a minimum ratio of 10 to 1 or more clearly stated a minimum of 10 observations per predictor (Peng et al.). There are 14 predictors in this study; therefore 140 would be the minimum recommendation.

For the purpose of this study, the population consists of 622 Black males entering the institution as traditionally aged, first-time, full-time matriculates during the fall 2003, fall 2004, and fall 2005 semesters. Incorporating the minimum 140 recommended participants, I initially invited 400 Black male students classified as persisters and non-persisters to participate. Attaining the minimum 140 participants will enable me to make generalizations to the population. Using stratified random sampling I surveyed students incorporating a proportional sampling strategy as illustrated in Table 3.

Table 3

Description of Sample	2003	2004	2005
Total Black male population by cohort	191	214	217
Percent of total Black male population of 622	31%	34%	35%
Black male persistence rate by cohort	41%	60%	76%
Number of Black male persisters invited to participate	55	84	119
Minimum responses from persisters needed for study	18	28	37
Number of participants (persisters)	19	28	38
Number of Black male non-persisters invited to participate	69	52	21
Minimum responses from non-persisters needed for study	21	20	12
Number of participants (non-persisters)	23	24	16

### Instrumentation

The survey instrument I employed to assist me in collecting the appropriate data to identify the affects of Black male student’s experiences and quality of engagement is the *College Student Experiences Questionnaire* (CSEQ), Fourth Edition (Pace & Kuh, 1998). The instrument was developed by C. Robert Pace and George D. Kuh originally in 1979, revised in 1983, modified in format in 1986, and revised in 1998. The instrument was designed to measure the quality of effort students expend in availing themselves to various university resources and opportunities for learning and development, the student’s perceptions of how the campus environment incorporates diversity in its educational priorities, and the student’s perceptions of how their efforts have assisted them in making progress toward achieving several learning outcomes. The instrument measures the

student's perception of cognitive growth as well as personality development and the extent to which students utilize the college resources important to learning and development such as the library and student union. The instrument is divided into several sections collecting Background Information, College Activities, Conversations, Reading/Writing, Opinions about College, The College Environment, and Estimate of Gains. For the purpose of this study, I will focus primarily on the College Activities Section.

The College Activities Section measures 12 scales: Library Experiences (10 items), Experiences with Faculty (10 items), Course Learning (10 items), Art, Music, Theater (12 items), Student Union (10 items), Athletic and Recreation Facilities (10 items), Clubs and Organizations (10 items), Experience in Writing (10 items), Personal Experiences (10 items), Student Acquaintances (10 items), Science (10 items), and Campus Residence (10 items). Each item is positively worded providing the student with four possible responses ranging from 4 (*very often*), 3 (*often*), 2 (*occasionally*), and 1 (*never*).

The Library Experiences Scale measures the frequency of different ways students use the library. Examples of questions found in this scale are used the library as a quiet place to read or study materials you brought with you, read assigned materials other than textbooks in the library, and asked a librarian or staff member for help in finding information on some topic.

The Computer and Information Technology Usage Scale measures the frequency and different ways students use computers and information technology in college to complete assignments. Examples of questions found in this scale are used a computer or word processor to prepare reports or papers, used a computer to produce visual displays of information, and used a computer to analyze data.

The Course Learning Scale measures the types of activities the student is involved in to maximize learning required for college. Examples of the questions found in this scale are completed the assigned readings for class, took detailed notes during class, contributed to class discussions, worked on a class assignment, project, or presentation with other students, and worked on a paper or project where you had to integrate ideas from various sources.

The Writing Experiences Scale measures the effort students put forth to improve their writing skills. Examples of the questions found in this scale are used a dictionary or thesaurus to look up the proper meaning of words, asked other people to read something you wrote to see if it was clear to them, referred to a book or manual about writing style, grammar, etc., and prepared a major written report for a class.

The Experiences with Faculty Scale measures the student's interactions with faculty in their efforts to complete degree requirements and course requirements. Examples of the questions found in this scale are talked with your instructor about information related to a course you were taking, discussed ideas from a term paper or other class project with a faculty member, socialized with a faculty member outside of class, and worked with a faculty member on a research project.

The Art, Music, Theater Scale measures the frequency students engage in art, music, or theater related activities. Examples of the questions found in this scale are talked about art or the theater with other students, friends, or family members, went to an art exhibit/gallery or a play, dance, or other theater performance, on or off the campus, and participated in some music activity on or off the campus.

The Campus Facilities Scale measures the frequency and different ways students avail themselves to campus facilities. Examples of the questions found in this scale are used a

campus lounge to relax or study by yourself, met other students at some campus location for a discussion, used a campus learning lab or center to improve study or academic skills, and played a team sport.

The Clubs and Organizations Scale measures the student's involvement in campus organizations. Examples of the questions found in this scale are attended a meeting of a campus club, organization, or student government group, worked on an off-campus committee, organization, or project, and met with a faculty member or staff advisor to discuss the activities of a group or organization.

The Personal Experiences Scale measures the student's ability to discuss personal issues with someone and efforts to improve his personal growth. Examples of the questions found in this scale are told a friend or family member why you reacted to another person the way you did, asked a friend for help with a personal problem, taken a test to measure your abilities, interests, or attitudes, and talked with a faculty member, counselor or other staff member about personal concerns.

The Student Acquaintances Scale measures the frequency and depth of interactions students have with peers different from them. Examples of the questions found in this scale are became acquainted with students whose interests were different from yours, became acquainted with students whose race or ethnic background was different from yours, and had serious discussions with students whose political opinions were very different from yours.

The Scientific and Quantitative Experiences Scale measures the frequency and different ways students incorporate scientific based learning into their experiences. Examples of the questions found in this scale are memorized formulas, definitions, technical terms and concepts, used mathematical terms to express a set of relationships,

completed an experiment or project using scientific methods, and explained an experimental procedure to someone else.

The Topics of Conversation Scale measures the frequency and breath of conversations students engage in. Examples of the questions found in this scale are discussed current events in the news, discussed computers and other technologies, and discussed international relations.

The Information in Conversations Scale measures how frequently the student incorporates information from previous conversations and experiences into their conversations. Examples of the questions found in this scale are referred to knowledge you acquired in your reading or classes, explored different ways of thinking about the topic, and changed your opinion as a result of the knowledge or arguments presented by others.

The Reading/Writing Section measures the quantity of books the student has read over the past year and the quantity of written reports and exams the student completed over the past year. Examples of the questions found in this scale are the number of textbooks or assigned books you have read during the current year, the number of non-assigned books you have read during the current school year, and the number of essay exams you have taken during the current year.

### Validity and Reliability

The instrument was reviewed in *The Sixteenth Mental Measurements Yearbook* (Spies & Plake, 2005) by Kurt F. Geisinger, Vice President of Academic Affairs and Professor of Psychology at the University of St. Thomas located in Houston, Texas. Geisinger noted that the College Activities is the longest and the most important section of the survey. The instrument is developed under the premise that student learning is the goal of the institution and that student engagement greatly impacts student development and learning. The

individual items contained in the CSEQ are clearly written. The wording is very clear for any grouping of undergraduate students for whom English is the language of instruction. Each of the Quality of Effort items have internal consistency reliability estimates ranging from .70 - .92. Validation is addressed through content and construct validity. Other experts in the field have found the instrument appropriate and useful in assessing critical dimensions of higher education. Factor analysis suggests that the Quality of Effort scales are unifactorial, with the exception of Campus Facilities factor. The authors found that student responses were consistent with hypothesized patterns. Geisinger further commented on the reputation and credibility of the authors of the survey. The authors of the survey are at the forefront of the student engagement and higher education assessment literature which helps to insure that the coverage is good. The survey has been used extensively in higher education research with over 100,000 students completing the fourth edition since 1998. Geisinger also commented that the research basis for the instrument is extensive, the model supporting the measure impressive, and the psychometric quality is strong. The CSEQ provides valuable feedback to both the institution and the student.

The instrument was also reviewed in *The Sixteenth Mental Measurements Yearbook* (Spies & Plake, 2005) by M. David Miller, Professor of Educational Psychology and J. Monroe Miller, Graduate Student, both at the University of Florida in Gainesville, Florida. The design of the CSEQ was prompted by a finding from the National Center of Educational Statistics to include the interaction between the characteristics of the student and the environment of the campus as an indicator of quality of effort. Norms are provided based on a sample of approximately 87,000 students. Evidence of statistical quality is provided through adequacy of variance in responses, acceptable examinations of distribution normality, minimal impact of missing data. The standard error of measurement

for the scales ranged from .00 to .03. Skew ranged from -.7 to .8. Kurtosis ranged from -.7 to .7. Missing data ranged from .1% to 3.4%. Reliability was assessed by use of Cronbach's alpha for each scale and by reporting the intercorrelations between items of each scale. The alpha range for the quality of effort scales ranged from .74 to .92. The college environment scales exhibited alpha ranges from .70 to .75. Most items were moderately correlated between .30 to .40. Content validity was assessed through expert agreement. Experts analyzed the loadings from a factor analysis. Construct validation was assessed by factor analysis. The loadings suggested that campus facilities scale loads on two factors and all other scales were unifactorial. Factor analysis with oblique rotations of the principle factors was consistent with scale expectations. Construct validity was assessed using blocked hierarchical regression suggesting convergence for theoretically related scales. The strengths of the CSEQ are the administration and extensive use history, citation in over 250 sources, multiple methods of examining reliability and validity with reasonable results, and revisions consistent with advancement in empirical and theoretical research.

### Procedures

Following the advice of Creswell (2002), I obtained permission to conduct the study from the Institutional Review Board from Louisiana State University A&M and Kappa University. In my request, I submitted to each institution a description of the study describing how the data will be collected, how participants will be protected, and a sample of the consent form (Creswell, 2002).

I contacted the Office of Institutional Research at Kappa University for assistance in identifying the students of interest to me in conducting the study. In an effort to protect the students, I requested two files. One file will contained the student's name, institutionally

assigned student identifier, e-mail address, local mailing address, and parent address. The other file contained the student's institutionally assigned student identifier, high school GPA, ACT scores. The second file was merged with the student's responses to the questionnaire. Kappa University adopted the procedure of assigning an institutional student identifier in an effort to reduce the likelihood of identity theft if information containing the student's personal information were disclosed. The identifier can only be used to retrieve personal student information by university employees with access to the institution's student information system. If, by chance, the student file containing sensitive information is disclosed, only university employees with access to the university's student information system can link the student with the data. The two files will be stored on a password protected computer. I am the only person with the password to gain access to information stored on the computer. I have deleted the files from my database.

I used Microsoft Excel 2002 to assign random numbers to each Black male student in the population. The specified random sample of students identified as traditional, full-time, first time matriculating Black male freshman for fall 2003, fall 2004, and fall 2005 were either e-mailed or mailed the questionnaire. The questionnaire is one item of a three-item packet mailed to the students. The other two items mailed were the authorization statement and a statement explaining the purpose of the study and the reasons the student was selected to participate in the study. For mailed questionnaires, a self-addressed stamped envelope was included in the packet information so that the participant would not incur any expense in returning the completed questionnaire.

#### Data Collection

Carini, Hayek, Kuh, Kennedy, and Ouimet (2003) discussed issues related to data collection by use of web and paper surveys. The researchers noted that submission mode

effects were generally small. Students completing online surveys responded more favorably on scales measured than those choosing to complete the paper version. The researchers noted computer-mediated surveys may actually yield more honest responses on items of a sensitive nature. The researchers also found accessibility as non-problematic, particularly as it relates to students of color in comparison to White students. Students completing online surveys may respond more positively to the items because of the ease of use and accessibility. Online surveys may seem less time-consuming and more convenient than paper surveys.

Creswell (2002) maps out a survey administration procedure that will increase the response rate. Following Creswell's recommendation, I initially e-mailed all persisters providing them with an invitation to participate, consent information, and the address of the website for online completion of the questionnaire. Consent was affirmed by their willingness to complete the questionnaire. I choose to electronically communicate with persisters because they have an institutionally provided e-mail account. Persisters also have free internet access provided by Kappa University. I mailed non-persisters the same information sent electronically to persisters inviting them to complete the online questionnaire. Two weeks later I sent mail and e-mail reminders to students not completing the questionnaire reminding them to complete the questionnaire online. At this point in the data collection process I collected sixty-three online surveys with fifty-seven that provided usable information critical to this study.

Two weeks later, in my attempt to collect the minimum number of usable responses, I called many Black males at home to offer them the opportunity to come to my office to complete the survey or collect the information over the telephone. Another seventeen students went online to complete the survey, while seventy-four students were willing to

complete the survey over the telephone. Each telephone interview lasted approximately thirty minutes answering only questions from the College Activities Section. The College Activities Section is the part of the questionnaire that collects the student engagement data. Collecting survey information online, primarily on the weekends, took eleven weeks to complete the data collection phase.

### Data Analysis

I selected the Statistical Package for the Social Sciences (SPSS) version 11.5 for Microsoft Windows to perform my analysis. This statistical software program met all of the requirements articulated by Creswell (2002) and is cited as one of the rigorous software packages used in research literature on studies conducted involving a dichotomous outcome variable (Creswell, 2002; Menard, 2002; Pampel, 2000; Pedhazur, 1997; Peng et al.).

Menard (2002) states that it is generally accepted practice to use stepwise or backward procedures for purposes of purely predictive research and exploratory research. The analysis for this study is to identify, from the selected predictors, what variables are statistically significant predictors of student persistence relative to Black males. Menard (2002) also suggested using backward elimination rather than forward inclusion procedures. Backward elimination reduces the risk of failing to find a relationship when one exists (Menard, 2002).

In stepwise logistic regression variables are entered or removed based on their importance (Menard, 2002). Importance is defined in terms of their statistical significance in predicting the variance in the dependent variable persistence. The most important variable in statistical terms is the one that is predicted to produce the greatest statistically significant change in the log-likelihood of realizing persistence (Pampel, 2000). Predictors

remain based on the most making the greatest contribution to the model and having a p of .05 or less and are removed from the model if it is determined that the predictor contribution has weakened to a point of non-significance. Non-significance is signified by a p of the -2 log likelihood greater than .10.

I developed a reduced model by using a likelihood ratio backward elimination test. The process begins with the full model and proceeds with an evaluation of each predictor for possible elimination. The process eliminates, one at a time, individual variables that will, with their omission, have a statistically significant positive impact on the predictive strength of the model. The final model is a more efficient, parsimonious version of the full model. DeMaris (1995) recommends presenting the results in odds ratio when the study is interested in the impact of the independent variables, controlling for the effects of other variables in the model. Morgan and Teachman (1988) further recommend the use of odds ratios to prevent the loss of the full effect of the true impact of a unit change in independent variables on the outcome variable.

The purpose of this study is to develop a student persistence model comprised primarily of predictors Black male students have some degree of control over. The CSEQ collected information related to student engagement in educationally purposeful activities. I am interested in how these variables predict or explain the persistence of Black male students.

## CHAPTER FOUR

### RESEARCH RESULTS

The purpose of this study is to investigate the relationship between the student engagement and student persistence for Black males attending a predominately White institution in the South. Three research questions guided this study along with fourteen hypotheses.

#### Campus Profile

Data for all Black and White students entering Kappa University as first-time, full-time, degree-seeking, traditionally-aged students in the fall 2003, fall 2004 or fall 2005 semesters were collected from the institution's Office of Institutional Research. This extensive information is presented to explore the differences, using traditionally used predictors, between groups. Traditionally used predictors of student success collected for this study include ACT scores (ACT composite (ACTC), ACT English sub-score (ACTE), ACT Math sub-score (ACTM), ACT Reading sub-score (ACTR), and ACT Science sub-score (ACTS)), high school grade point average (HS\_GPA), percent of hours attempted in which a passing letter-grade was earned (%AE), and college grade point average (COLL\_GPA).

Logistic regression analysis was performed to identify statistically significant predictors of persistence relative to each group. The predictors (ACTC, ACTE, ACTM, ACTR, ACTS, HS\_GPA, %AE, COLL\_GPA) were entered using backward stepwise regression.

#### Black and White Students

Table 4 displays a representation of all Black and White students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004,

and fall 2005 semesters. Of the 7,135 entering students, 4,379 were enrolled at the end of the spring 2006 semester. This resulted in a 61.3 percent persistence rate. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE) are presented in Table 4. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 4

Mean Scores of Black and White Students			
Variable	All	P	NP
N	7135	4379	2756
ACTC	21.43	21.97	20.56
ACTE	21.80	22.40	20.80
ACTM	20.54	21.10	19.65
ACTR	21.57	22.15	20.65
ACTS	21.25	21.68	3.00
HS_GPA	3.14	3.22	0.59
%AE	0.73	0.83	1.87
COLL_GPA	2.40	2.74	1.87

*Note.* P = persisters; NP = non-persisters.

Table 5 displays the results of the logistic regression analysis. Using the data file consisting of all Black and White students, a backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The final model is reported in Table 5. The full model ( $\chi^2 = 140.823$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 9187.988$ ,  $p = .000$ ). The base model correctly predicted 61.4 percent of cases, while

the full model correctly predicted 63.4 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 330.786, df = 1, p = .000) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 11.233, df = 8, p = .189) indicated that the full model is a good fit.

The only predictor making a statistically significant contribution in explaining the variance in persistence for this group is HS\_GPA. Using HS\_GPA the model correctly predicts 63.4 percent of the cases. The final model, as depicted in Table 5, is Logit (Persistence) = .896 (HS\_GPA) – 2.329. The results reveal the following about Black and White females: For every one point increase in HS\_GPA, the odds of Black and White females persisting increases by a factor of 2.450, with all other factors being equal.

Table 5

Logistic Regression Predicting Persistence of All Black and White Students							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
HS_GPA	.896	.051	314.335	1	.000	2.450	2.219	2.706
Constant	-2.329	.158	216.234	1	.000	.097		

#### Black and White Female Students

Table 6 displays a representation of all Black and White female students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 4,124 entering female students, 2,540 were enrolled at the end of the spring 2006 semester. The resulting persistence rate is 62 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE)

are presented in Table 6. Persisters again outperformed non-persisters in each of the aforementioned categories.

Table 6

Mean Scores of Black and White Females

Variable	All	P	NP
N	4124	2540	1584
ACTC	21.32	21.87	20.44
ACTE	22.16	22.78	21.17
ACTM	20.00	20.55	19.13
ACTR	21.75	22.34	20.80
ACTS	20.79	21.23	21.15
HS_GPA	3.22	3.29	2.88
%AE	0.77	0.85	0.54
COLL_GPA	2.52	2.84	1.68

A backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The final model is reported in Table X. The full model ( $\chi^2 = 140.823$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 5212.438$ ,  $p = .000$ ). The base model correctly predicted 61.8 percent of cases, while the full model correctly predicted 64.5 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 224.293$ ,  $df = 2$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi^2 = 7.161$ ,  $df = 8$ ,  $p = .519$ ) indicated that the full model is a good fit.

The final model, as depicted in Table 7, is  $\text{Logit}(\text{Persistence}) = .595(\text{HS\_GPA}) + .084(\text{ACTC}) - 3.201$ . The results reveal the following about Black and White females: For every one point increase in ACTC, the odds of Black and White females persisting increases by a factor of 1.088, with all other factors being equal. For every one point increase in HS\_GPA, the odds of Black and White females persisting increases by a factor of 1.813, with all other factors being equal.

Table 7

Logistic Regression Predicting Persistence of Black and White Females							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
ACTC	.084	.012	52.835	1	.000	1.088	1.063	1.113
HS_GPA	.595	.081	54.116	1	.000	1.813	1.547	2.125
Constant	-3.201	.256	156.307	1	.000	.041		

I repeated the analysis for Black females and White females. Table 8 displays the demographic information for Black females and Table 10 displays the same information for White females.

#### Black Females

Table 8 displays a representation of all Black female students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 874 entering Black female students, 485 were enrolled as of the close of the spring 2006 semester. The resulting persistence rate is 55 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE)

are presented in Table 8. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 8

Mean Scores of Black Females

Variable	All	P	NP
N	874	485	389
ACTC	18.91	19.59	18.05
ACTE	19.39	20.09	18.51
ACTM	17.78	18.33	17.09
ACTR	19.06	19.88	18.03
ACTS	18.80	19.42	18.02
HS_GPA	3.05	3.14	2.94
%AE	.71	.81	.58
COLL_GPA	2.11	2.49	1.64

*Note.* P = Persister; N = Non-persister

A Backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The final model is reported in Table 9. The full model ( $\chi^2 = 978.701$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 1170.705$ ,  $p = .000$ ). The base model correctly predicted 61.8 percent of cases, while the full model correctly predicted 71.2 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 192.003$ ,  $df = 5$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer

and Lemeshow Test (chi-square = 15.300, df = 8, p = .054) indicated that the full model is a good fit.

The final model, as depicted in Table 9, is  $\text{Logit}(\text{Persistence}) = .563 (\text{CUMGPA}) + 1.826 (\% \text{AE}) - 3.875$ . According to the results, the following are true for Black females: For every one point increase in CUMGPA, the odds of Black females persisting increases by a factor of 1.757, all other factors being equal. For every one point increase in %AE, the odds of Black females persisting increases by a factor of 6.207, with all other factors being equal.

Table 9

Logistic Regression Predicting Persistence of Black Females

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	1.826	.527	12.004	1	.001	6.207	2.210	17.435
ACTC	.216	.055	15.235	1	.000	1.241	1.113	1.382
ACTE	-.070	.038	3.479	1	.062	.932	.866	1.004
HS_GPA	-.351	.206	2.888	1	.089	.704	.470	1.055
CUM_GPA	.563	.160	12.433	1	.000	1.757	1.284	2.403
Constant	-.876	.660	34.522	1	.000	.021		

### White Females

Table 10 displays a representation of all Black and White female students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 3,250 entering White female students, 2,055 were enrolled as of the close of the spring 2006 semester. The resulting persistence rate is 63 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was

earned (%AE) are presented in Table 10. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 10

Mean Scores of White Females			
Variable	All	P	NP
N	3250	2055	1195
ACTC	21.97	22.41	21.22
ACTE	22.91	23.42	22.04
ACTM	20.60	21.07	19.80
ACTR	22.48	22.92	21.71
ACTS	21.33	21.66	20.77
HS_GPA	3.26	3.33	3.14
%AE	.78	.85	.65
COLL_GPA	2.63	2.92	2.13

*Note.* P = Persister; NP = Non-persister.

A Backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The final model is reported in Table 11. The full model ( $\chi^2 = 935.840$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 2902.457$ ,  $p = .000$ ). The base model correctly predicted 75.2 percent of cases, while the full model correctly predicted 90.2 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 1966.617$ ,  $df = 4$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The

Hosmer and Lemeshow Test (chi-square = 12.748, df = 8, p = .121) indicated that the full model is a good fit.

The final model, as depicted in Table 11, is  $\text{Logit}(\text{Persistence}) = 3.533 (\text{CUMGPA}) + 6.869 (\% \text{AE}) - 2.090 (\text{HS\_GPA}) + .356 (\text{ACTE}) - 13.100$ . According to the results, the following are true for White females: For every one point increase in CUMGPA, the odds of White females persisting increases by a factor of 34.235, all other factors being equal. For every one point increase in HS\_GPA, the odds of White females persisting decreases by a factor of .124, with all other factors being equal. For every one point increase in ACTE, the odds of White females persisting increases by a factor of 1.428, with all other factors being equal. For every one point increase in %AE, the odds of White females persisting increases by a factor of 962.447, with all other factors being equal.

Table 11

Logistic Regression Predicting Persistence of White Females								
	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	6.869	.589	135.961	1	.000	962.447	303.321	3053.873
ACTE	.356	.029	154.398	1	.000	1.428	1.350	1.511
HS_GPA	-2.090	.249	70.546	1	.000	.124	.076	.201
CUM_GPA	3.533	.226	243.918	1	.000	34.235	21.973	53.338
Constant	-13.100	.905	209.691	1	.000	.000		

### Black and White Male Students

Table 12 displays a representation of all Black and White male students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 3,097 entering students, 1,876 were enrolled as of the spring 2006 semester. The resulting persistence rate is 60.5 percent. The mean ACT

scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE) are presented in Table 12. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 12

Mean Scores of Black and White Males			
Variable	All	P	NP
N	3097	1876	1221
ACTC	21.57	22.12	20.71
ACTE	21.31	21.89	20.42
ACTM	21.22	21.83	20.27
ACTR	21.36	21.92	20.50
ACTS	21.85	22.30	21.15
HS_GPA	3.03	3.12	2.88
%AE	.70	.80	.54
COLL_GPA	2.24	2.60	1.68

*Note.* P = Persister; NP = Non-persister.

The analysis was repeated for Black males and White males. Table 14 displays the demographic information for Black males and Table 16 displays the same information for White males.

A backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The full model ( $\chi^2 = 1045.624$ ,  $p = .000$ ), as depicted in Table 13, is an improvement over the base model ( $\chi^2 = 3039.704$ ,  $p = .000$ ). The base model correctly

predicted 69.6 percent of cases, while the full model correctly predicted 88.3 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 1994.08, df = 5, p = .000) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 25.741, df = 8, p = .001) indicated that the full model may not be a good fit.

The final model, as depicted in Table 13, is  $\text{Logit}(\text{Persistence}) = 2.214 (\text{CUMGPA}) + 8.006 (\% \text{AE}) - 1.149 (\text{HS\_GPA}) - .156 (\text{ACTR}) + .515 (\text{ACTC}) - 12.846$ . According to the results, the following are true for Black and White males: For every one point increase in CUMGPA, the odds of Black and White males persisting increases by a factor of 9.152, with all other factors being equal. For every one point increase in HS\_GPA, the odds of Black and White males persisting decreases by a factor of .317, with all other factors being equal. For every one point increase in ACTR, the odds of Black and White males persisting decreases by a factor of .855, with all other factors being equal. For every one point increase in %AE, the odds of Black and White males persisting increases by a factor of 2,999.603, with all other factors being equal.

Table 13

Logistic Regression Predicting Persistence of Black and White Males

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	8.006	.568	199.030	1	.000	2999.60	986.286	9122.727
ACTC	.515	.051	99.892	1	.000	1.673	1.512	1.851
ACTR	-.156	.031	25.115	1	.000	.855	.805	.909
HS_GPA	-1.149	.207	30.743	1	.000	.317	.211	.476
CUM_GPA	2.214	.168	174.053	1	.000	9.152	6.587	12.717
Constant	-12.846	.828	240.602	1	.000	.000		

## Black Males in General

Table 14 displays a representation of all Black male students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 622 entering Black male students, 371 were enrolled as of the close of the spring 2006 semester. The resulting persistence rate is 59.6 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE) are presented in Table 14. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 14

Mean Scores of Black Males			
Variable	All	P	NP
N	622	371	251
ACTC	18.90	19.65	17.92
ACTE	18.62	19.58	17.34
ACTM	18.37	19.07	17.44
ACTR	18.61	19.30	17.68
ACTS	19.44	20.03	18.67
HS_GPA	2.82	2.91	2.70
%AE	.66	.77	.52
COLL_GPA	1.92	2.28	1.44

*Note.* P = persisters; NP = non-persisters.

A Backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The full model ( $\chi^2 = 646.618$ ,  $p = .000$ ), as presented in Table 15, is

an improvement over the base model ( $\chi^2 = 802.411$ ,  $p = .000$ ). The base model correctly predicted 57.7 percent of cases, while the full model correctly predicted 71.5 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 155.793$ ,  $df = 8$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi^2 = 7.932$ ,  $df = 8$ ,  $p = .440$ ) indicated that the full model is a good fit.

The final model, as depicted in Table 15, is  $\text{Logit}(\text{Persistence}) = 1.580 (\%AE) + .672 (\text{CUMGPA}) - 5.388$ . According to the results, the following are true for Black males: For every one point increase in CUMGPA, the odds of Black males persisting increases by a factor of 1.958, with all other factors being equal. For every one point increase in %AE, the odds of Black males persisting increases by a factor of 4.856, with all other factors being equal.

Table 15

Logistic Regression Predicting Persistence of Black Males

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	1.580	.661	5.714	1	.017	4.856	1.329	17.742
ACTC	.058	.332	.031	1	.861	1.060	.553	2.030
ACTE	.052	.091	.325	1	.569	1.053	.881	1.259
ACTM	.102	.092	1.236	1	.266	1.108	.925	1.327
ACTR	-.029	.087	.107	1	.743	.972	.820	1.153
ACTS	.054	.095	.331	1	.565	1.056	.877	1.271
HS_GPA	-.374	.232	2.602	1	.107	.688	.437	1.084
CUMGPA	.672	.213	9.923	1	.002	1.958	1.289	2.975
Constant	-5.388	.847	40.471	1	.000	.005		

## Black Males Completing the CSEQ

Table 16 displays a representation of all Black male students that completed the CSEQ who entered Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 148 entering Black male students, 85 were enrolled as of the close of the spring 2006 semester. The resulting persistence rate is 57 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE) are presented in Table 16. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 16

### Mean Scores of Black Males Completing the CSEQ

Variable	All	P	NP
N	148	85	63
ACTC	19.33	19.66	18.89
ACTE	19.26	19.72	18.65
ACTM	18.59	18.98	18.06
ACTR	19.32	19.64	18.89
ACTS	19.59	19.76	19.35
HS_GPA	2.84	2.92	2.72
%AE	.68	.77	.54
COLL_GPA	2.09	2.41	1.67

*Note.* P = persisters; NP = non-persisters.

A backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The full model ( $\chi^2 = 176.157, p = .000$ ), as presented in Table 17, is an improvement over the base model ( $\chi^2 = 201.889, p = .072$ ). The base model correctly predicted 57.4 percent of cases, while the full model correctly predicted 71.6 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 25.732, df = 1, p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi^2 = 9.292, df = 8, p = .318$ ) indicated that the full model is a good fit.

The final model, as depicted in Table 17, is  $\text{Logit}(\text{Persistence}) = 2.739 (\%AE) - 2.190$ . According to the results, the following are true for Black males: For every one point increase in %AE, the odds of Black males persisting increases by a factor of 15.466, with all other factors being equal.

Table 17

Logistic Regression Predicting Persistence of Black Males (CSEQ)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	2.739	1.399	3.834	1	.000	15.466	.997	32.678
Constant	-2.190	1.487	2.169	1	.000	.083		

### White Males

Table 18 displays a representation of all White male students entering Kappa University as first-time, full-time, degree-seeking students during the fall 2003, fall 2004, and fall 2005 semesters. Of the 2,496 entering White female students, 1,534 were enrolled as of the close of the spring 2006 semester. The resulting persistence rate is 61.4 percent. The mean ACT scores, high school grade point average (HS\_GPA), college grade point

average (COLL\_GPA), and percent of hours attempted in which a passing grade was earned (%AE) are presented in Table 19. Persisters outperformed non-persisters in each of the aforementioned categories.

Table 18

Mean Scores of White Males

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Variable	All	P	NP
N	2496	1534	962
ACTC	22.21	22.68	21.46
ACTE	21.96	22.40	21.24
ACTM	21.90	22.45	21.03
ACTR	22.02	22.50	21.25
ACTS	22.42	22.80	21.82
HS_GPA	3.08	3.17	2.93
%AE	.71	2.66	.55
COLL_GPA	2.32	2.66	1.75

---

*Note.* P = Persisters; NP = Non-persisters.

A backward stepwise logistic regression model was estimated using the Traditional Factors as predictors. The final model is reported in Table 19. The full model ( $\chi^2 = 2747.243$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 3242.440$ ,  $p = .000$ ). The base model correctly predicted 61.9 percent of cases, while the full model correctly predicted 73.4 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 495.147$ ,  $df = 8$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer

and Lemeshow Test (chi-square = 11.862, df = 8, p = .157) indicated that the full model is a good fit.

The final model, as depicted in Table 19, is  $\text{Logit}(\text{Persistence}) = 1.946 (\%AE) - .080 \text{ACTE} + .465 (\text{CUMGPA}) - 2.886$ . According to the results the following are true for White males: For every one point increase in ACTE, the odds of White males persisting decreases by a factor of .923, with all other factors being equal. For every one point increase in CUMGPA, the odds of White males persisting increases by a factor of 1.592, with all other factors being equal. For every one percent increase in %AE, the odds of White males persisting increases by a factor of 7.001.

Table 19

Logistic Regression Predicting Persistence of White Males

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	1.946	.298	42.593	1	.000	7.001	3.903	12.560
ACTC	.262	.156	2.811	1	.094	1.300	.957	1.766
ACTE	-.080	.042	3.602	1	.058	.923	.850	1.003
ACTR	-.044	.041	1.117	1	.291	.957	.882	1.038
ACTS	-.042	.043	.950	1	.330	.959	.881	1.043
HS_GPA	-.108	.120	.808	1	.369	.898	.710	1.135
CUMGPA	.465	.087	28.639	1	.000	1.592	1.343	1.888
Constant	-.876	.660	34.522	1	.000	.021		

Analysis Performed to Answer the First Research Question

The first research question sought to find differences in student engagement as measured by the CSEQ between Black males who persist and those who do not. The final analysis included 19 persisters and 23 non-persisters from the fall 2003 cohort, 28 persisters and 24 non-persisters from the fall 2004 cohort, and 38 persisters and 16 non-

persisters from the fall 2005 cohort for a total of 148 usable responses. The results of the analysis are organized by the 14 student engagement scales in the Student Activities of the CSEQ. An independent-samples t-test was performed to identify differences in scale mean scores between persisters and non-persisters. The comparisons are between students who responded Often or Very Often to each item. Table 20 presents the percentages organized by persisters and non-persisters.

Table 20

CSEQ Responses (Often or Very Often)		
Scale	Persisters (n = 85)	Non-persisters (n = 63)
Library	38.30%	18.50%
Computer & Information Technology	43.50%	27.30%
Course Learning	64.50%	32.20%
Writing Experiences	55.96%	31.74%
Experiences with Faculty	44.97%	15.74%
Art, Music, Theater	17.92%	12.23%
Campus Facilities	38.99%	20.11%
Clubs and Organizations	23.32%	12.06%
Personal Experiences	31.17%	20.25%
Student Acquaintances	46.64%	27.78%
Scientific and Quantitative Experiences	37.89%	20.31%
Topics of Conversation	49.52%	25.88%
Information in Conversations	41.77%	21.95%

### Library

The Library Usage Scale measures how frequently and in what ways the students utilize the library. Examples include using the library to study or meet, reading non-assigned materials in the library, or asking a librarian for assistance. For this scale, 38.3 percent of Persisters responded that they used the library either Very Often or Often, while only 18.3 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Library Usage score for Persisters and Non-persisters. The results indicated that there was a statistically

significant difference in Library usage between persisters and non-persisters,  $t(145) = 5.634$ ,  $p = .000$ . That is, the average Library usage score for persisters ( $M = 2.36$ ,  $SD = .608$ ) was significantly different from that of non-persisters ( $M = 1.79$ ,  $SD = .609$ ).

A backward stepwise logistic regression model was estimated using the Library Scales as predictors. The final model is reported in Table 21. The full model ( $\chi^2 = 140.823$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 76.9 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi\text{-square} = 59.952$ ,  $df = 9$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi\text{-square} = 3.855$ ,  $df = 7$ ,  $p = .796$ ) indicates that the full model is a good fit. The final model, as depicted in Table 21, is  $\text{Logit}(\text{Persistence}) = 2.393 (\text{LIB1}(2)) + 4.376 (\text{LIB1}(3)) + 1.847 (\text{LIB5}(1)) + 2.752 (\text{LIB5}(2)) + 2.822 (\text{LIB5}(3)) - 3.189 (\text{LIB6}(3))$ .

The final model reveals that Black males who often and very often use the library as a quiet place to read or study materials they brought with them have 10.94 and 79.52, respectively, times higher odds of persisting than Black males who never do. Black males who occasionally, often or very often use an index or database in the library to find material on some topic have a 6.34, 15.67, and 16.81, respectively, times higher odds of persisting than Black males who never. Black males who very often develop a bibliography or reference list for a term paper or other report have a .04 times less odds of persisting than Black males who never do.

Table 21

Logistic Regression to Predict Persistence (Library Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
LIB1			15.085	3	.002			
LIB1(1)	1.482	.857	2.994	1	.084	4.403	.821	23.601
LIB1(2)	2.393	.908	6.942	1	.008	10.942	1.845	64.871
LIB1(3)	4.376	1.220	12.864	1	.000	79.519	7.277	868.989
LIB5			10.648	3	.014			
LIB5(1)	1.847	.677	7.448	1	.006	6.339	1.683	23.880
LIB5(2)	2.752	.892	9.523	1	.002	15.673	2.730	89.991
LIB5(3)	2.822	1.224	5.312	1	.021	16.806	1.525	185.156
LIB6			9.388	3	.025			
LIB6(1)	.116	.540	.046	1	.830	1.123	.390	3.234
LIB6(2)	-1.142	.797	2.052	1	.152	.319	.067	1.522
LIB6(3)	-3.189	1.174	7.377	1	.007	.041	.004	.412
Constant	-0.167	.343	.237	1	.626	.846		

N = 145

### Computer and Information Technology

The Computer and Technology Usage Scale measures how often students utilize computer technology and how often they incorporate computers and computer technology in their learning. Examples include using e-mail to communicate with other students or an instructor, using the computer to analyze data, or developing a web page or a multimedia presentation. For this scale, 43.5 percent of Persisters responded that they used computer

and technology either Often or Very Often, while only 27.3 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Computer and Technology Usage score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Computer and Technology usage between Persisters and Non-persisters,  $t(146) = 4.513, p = .000$ . That is, the average Computer and Technology usage score for Persisters ( $M = 2.41, SD = .550$ ) was significantly different from that of Non-persisters ( $M = 1.99, SD = .582$ ).

A backward stepwise logistic regression model was estimated using the Computer and Technology Scales as predictors. The full model ( $\chi^2 = 155.004, p = .000$ ), as reported in Table 22, is an improvement over the base model ( $\chi^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 74.3 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 42.544, df = 6, p = .000$ ) also indicates the model is a good fit for the data. The Hosmer and Lemeshow Test ( $\chi^2 = 6.191, df = 8, p = .626$ ) indicates that the full model is a good fit. The final model, as depicted in Table 22, is  $\text{Logit}(\text{Persistence}) = 1.234 (\text{COMPUT7 (1)}) + 3.005 (\text{COMPUT7 (2)}) + 3.752 (\text{COMPUT7 (3)})$ .

The final model finds Black males who occasionally, often and very often use a computer to produce visual displays or information have a 3.43, 20.191, and 42.60, respectively, times higher odds of persisting than Black males who never do.

Table 22

Logistic Regression to Predict Persistence (Computer and Information Technology Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
COMPUT2			10.341	3	.016			
COMPUT2(1)	-1.217	.670	3.298	1	.069	.296	.080	1.101
COMPUT2(2)	-0.436	.733	.354	1	.552	.647	.154	2.721
COMPUT2(3)	.677	.894	.574	1	.449	1.968	.341	11.356
COMPUT3			5.825	3	.120			
COMPUT3(1)	.467	.497	.884	1	.347	1.595	.603	4.222
COMPUT3(2)	-1.175	.821	2.049	1	.152	.309	.062	1.543
COMPUT3(3)	-1.280	.988	1.676	1	.195	.278	.040	1.930
COMPUT6			5.849	3	.199			
COMPUT6(1)	.697	.542	1.653	1	.706	.739	.694	5.807
COMPUT6(2)	-0.302	.801	.142	1	.706	.739	.154	3.556
COMPUT6(3)	-1.458	.839	3.021	1	.082	.233	.045	1.204
COMPUT7			19.512	3	.000			
COMPUT7(1)	1.234	.570	4.688	1	.030	3.434	1.124	10.489
COMPUT7(2)	3.005	.794	14.325	1	.000	20.191	4.259	95.722
COMPUT7(3)	3.752	1.045	12.891	1	.000	42.598	5.494	330.255
Constant	.257	.337	.581	1	.446	1.293		

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N = 146

### Course Learning

The Course Learning Scale measures the type of learning that occurs for the student.

Examples include participating in class discussions, completing class assignments, or

explaining material from a course to someone else. For this scale, 64.5 percent of Persisters responded that they engaged in course learning either Often or Very Often, while only 32.2 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Course Learning score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Course Learning between Persisters and Non-persisters,  $t(146) = 6.126, p = .000$ . That is, the average Course Learning score for Persisters ( $M = 2.90, SD = .611$ ) was significantly different from that of Non-persisters ( $M = 2.27, SD = .630$ ).

A backward stepwise logistic regression model was estimated using the Course Learning Scales as predictors. The final model is reported in Table 23. The full model ( $\chi^2 = 164.591, p = .000$ ) is an improvement over the base model ( $\chi^2 = 201.889, p = .072$ ). The base model correctly predicted 57.4 percent of cases, while the full model correctly predicted 74.3 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi^2 = 37.298, df = 3, p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi^2 = 2.101, df = 2, p = .910$ ) indicates that the full model is a good fit.

The final model, as depicted in Table 23, is  $\text{Logit}(\text{Persistence}) = 1.531(\text{COURSE3}(2)) + 2.518(\text{COURSE3}(3))$ . The final model finds Black males who often and very often contribute to class discussions have a 4.63 and 12.40 times higher odds of persisting than Black males who never do.

Table 23

Logistic Regression to Predict Persistence (Course Learning Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
COURSE3			30.717	3	.000			
COURSE3(1)	-.288	.644	.200	1	.655	.750	.212	2.649
COURSE3(2)	1.531	.624	6.021	1	.014	4.625	1.361	15.717
COURSE3(3)	2.518	.730	11.909	1	.001	12.400	2.968	51.811
Constant	.247	.215	1.328	1	.249	1.280		

N = 146

### Writing Experiences

The Writing Experiences Scale measures the experiences of students engaging in writing and writing activities on campus. Examples include using a thesaurus or dictionary to look up the proper meaning of words, referring to a book or manual about writing, or asking a faculty member for advise on how to improve your writing. For this scale, 55.96 percent of Persisters responded either Often or Very Often on the items in this scale, while only 31.74 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Writing Experiences score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Writing Experiences between Persisters and Non-persisters,  $t(146) = 5.531$ ,  $p = .000$ . That is, the average Writing Experiences score for Persisters ( $M = 2.70$ ,  $SD = .625$ ) was significantly different from that of Non-persisters ( $M = 2.09$ ,  $SD = .708$ ).

A Backward stepwise logistic regression model was estimated exploring the usefulness of the Writing Scale in predicting persistence. The final model is reported in Table 24.

The full model ( $\chi^2 = 164.315, p = .000$ ) is an improvement over the base model ( $\chi^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 73.0% of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 37.574, df = 6, p = .000) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 2.819, df = 6, p = .831) indicates that the full model is a good fit. The final model, as depicted in Table 24, is Logit (Persistence) = 1.573 (Write (3)). The final model indicates Black males who very often use a dictionary or thesaurus to look up the proper meaning of words have a 4.82 times higher odds of persisting than Black males who never do.

Table 24

Logistic Regression to Predict Persistence (Writing Experiences Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
WRITE1			10.951	3	.012			
WRITE1(1)	.376	1.237	.093	1	.761	1.457	.129	16.448
WRITE1(2)	1.560	1.249	1.560	1	.212	4.760	.411	55.070
WRITE1(3)	2.137	1.255	2.900	1	.089	8.478	.724	99.253
WRITE5			4.595	3	.204			
WRITE5(1)	.764	.710	1.156	1	.282	2.146	.533	8.635
WRITE5(2)	1.209	.736	2.702	1	.100	3.350	.792	14.163
WRITE5(3)	1.573	.772	4.152	1	.042	4.821	1.062	21.892
Constant	-0.064	.330	.038	1	.845	.938		

N = 146

## Experiences with Faculty

The Experiences with Faculty Scale measures student-to-faculty interaction. This construct is primarily concerned with students' interaction with faculty outside the classroom. Examples of student-to-faculty interactions includes working on a research project with a faculty member, engaging in conversations with faculty outside of class, or meeting with a faculty member outside of class. For this scale, 44.97 percent of Persisters responded either Often or Very Often, while only 15.74 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Experiences with Faculty score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Experiences with Faculty between Persisters and Non-persisters,  $t(144) = 5.454$ ,  $p = .000$ . That is, the average Experiences with Faculty score for Persisters ( $M = 2.37$ ,  $SD = .726$ ) was significantly different from that of Non-persisters ( $M = 1.72$ ,  $SD = .696$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Experiences with Faculty Scale in predicting persistence. The final model is reported in Table 25. The full model ( $\Delta^2 = 146.518$ ,  $p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 76.9 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients "goodness of fit" (chi-square = 61.691,  $df = 9$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 6.401,  $df = 8$ ,  $p = .602$ ) indicates that the full model is a good fit. The final model, as depicted in Table 25, is  $\text{Logit (Persistence)} = 1.683 (\text{FAC2}(2)) + 1.944 (\text{FAC5}(2)) + 2.759 (\text{FAC5}(3))$ . The final

model indicates Black males who often discuss their academic program or course selection with a faculty member have a 5.384 times higher odds of persisting than those who do not. Black males who often or very often work harder as a result of feedback from an instructor have a 6.983 and 15.783, respectively, times higher odds of persisting than Black males who never do.

Table 25

Logistic Regression to Predict Persistence (Experiences with Faculty Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
FAC2			7.554	3	.056			
FAC2(1)	.342	.528	.420	1	.517	1.408	.501	3.959
FAC2(2)	1.683	.695	5.874	1	.015	5.384	1.380	21.007
FAC2(3)	2.651	1.413	3.523	1	.061	14.173	.889	225.848
FAC5			13.451	3	.004			
FAC5(1)	.374	.626	.357	1	.550	1.453	.426	4.955
FAC5(2)	1.944	.692	7.892	1	.005	6.983	1.800	27.099
FAC5(3)	2.759	1.139	5.869	1	.015	15.783	1.693	147.095
FAC7			5.230	3	.156			
FAC7(1)	.417	.530	.619	1	.431	1.517	.537	4.285
FAC7(2)	-1.809	1.100	2.704	1	.100	.164	.019	1.415
FAC7(3)	-2.873	1.571	3.343	1	.067	.057	.003	1.229
Constant	-0.185	.359	.264	1	.607	.831		

N = 144

### Art, Music, Theater

The Art, Music, Theater Scale measures student involvement and experiences with different aspects of Art, Music, and Theater. Examples of Art, Music, and Theater involvement includes attending an art exhibit, attending a concert or engaging in conversations related to art, music or theater. For this scale, 17.92 percent of Persisters responded either Often or Very Often, while only 12.23 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Art, Music, Theater score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Art, Music, Theater between Persisters and Non-persisters,  $t(146) = -1.930$ ,  $p = .056$ . That is, the average Art, Music, Theater score for Persisters ( $M = 1.84$ ,  $SD = .636$ ) was significantly different from that of Non-persisters ( $M = 1.65$ ,  $SD = .541$ ).

A Backward stepwise logistic regression model was estimated exploring the usefulness of the Art, Music, Theater Scale in predicting persistence. The final model is reported in Table 26. The full model ( $\Delta^2 = 194.601$ ,  $p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 60.1% of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 10.806,  $df = 6$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 1.939,  $df = 5$ ,  $p = .858$ ) indicates that the full model is a good fit. The final model, as depicted in Table 26, is  $\text{Logit}(\text{Persistence}) = .827 (\text{AMT7}(1))$ .

Black males who occasionally read or discuss the opinions of art, music, or drama critics have a 2.287 times higher odds of persisting than Black males who never do.

Table 26

Logistic Regression to Predict Persistence (Art, Music, Theater Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
AMT7			6.754	3	.080			
AMT7(1)	.827	.364	5.167	1	.023	2.287	1.121	4.668
AMT7(2)	.514	.686	.560	1	.454	1.671	.435	6.415
AMT7(3)	1.718	1.120	2.352	1	.125	5.571	.620	50.031
Constant	.656	.331	3.942	1	.047	1.928		

N = 146

Campus Facilities

The Campus Facilities scale measures the frequency and purpose of use of campus facilities. Examples of Campus Facilities usage includes using a campus lounge or a quiet place on campus to study or read, using campus facilities for group meetings, or using the campus recreational facilities. For this scale, 38.99 percent of Persisters responded either Often or Very Often, while only 20.11 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Campus Facilities usage score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Campus Facilities usage between Persisters and Non-persisters,  $t(145) = -3.865$ ,  $p = .000$ . That is, the average Campus Facilities usage score for Persisters ( $M = 2.27$ ,  $SD = .681$ ) was significantly different from that of Non-persisters ( $M = 1.84$ ,  $SD = .651$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Campus Facilities Scale in predicting persistence. The final model is reported in Table 27. The full model ( $\chi^2 = 176.636$ ,  $p = .001$ ) is an improvement over the base model ( $\chi^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 66.7% of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 23.536,  $df = 6$ ,  $p = .001$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 2.527,  $df = 5$ ,  $p = .772$ ) indicates that the full model is a good fit. The final model, as depicted in Table 27, is  $\text{Logit}(\text{Persistence}) = 1.291 (\text{FACIL2 (2)}) + 1.745 (\text{FACIL2 (3)}) + .437$ .

Black males who often or very often meet other students at some campus location for a discussion have a 3.636 and 5.727, respectively, times higher odds of persisting than Black males who never do.

Table 27

Logistic Regression to Predict Persistence (Campus Facilities Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
FACIL2			16.870	3	.001			
FACIL2(1)	-0.047	.488	.009	1	.924	.955	.367	2.486
FACIL2(2)	1.291	.522	6.124	1	.013	3.636	1.308	10.109
FACIL2(3)	1.745	.637	7.517	1	.006	5.727	1.645	19.942
Constant	.437	.194	5.093	1	.024	1.548		

N = 145

## Clubs and Organizations

The Clubs and Organizations Scale measures the students involvement in campus and off campus clubs and other organizations. Examples include attending a club or organization meeting either on or off-campus, meeting with a faculty member or campus administrator in reference to a club or organization, or taking a leadership role in a club or organization. For this scale, 23.32 percent of Persisters responded either Often or Very Often, while only 12.06 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Clubs and Organizations involvement score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Clubs and Organizations involvement between Persisters and Non-persisters,  $t(144) = -3.024$ ,  $p = .003$ . That is, the average Clubs and Organizations involvement score for Persisters ( $M = 1.76$ ,  $SD = .829$ ) was significantly different from that of Non-persisters ( $M = 1.38$ ,  $SD = .684$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Clubs and Organizations Scale in predicting persistence. The final model is reported in Table 28. The full model ( $\Delta^2 = 171.901$ ,  $p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 66.9 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 29.988,  $df = 9$ ,  $p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 1.581,  $df = 5$ ,  $p = .903$ ) indicates that the full model is a good fit. The final model, as depicted in Table 28, is  $\text{Logit (Persistence)} = 1.772 (\text{CLUBS2 (1)}) + 2.287 (\text{CLUBS4 (1)}) - 2.549 (\text{CLUBS5 (2)}) + 1.402$ .

Black males who occasionally attended a meeting or a campus club, organization, or student government group have a 5.88 times higher odds of persisting than Black males who never do. Black males who occasionally met with a faculty member or staff advisor to discuss the activities of a group or organization have a 9.84 times higher odds of persisting than Black males who never do. Black males who often managed or provided leadership for a club or organization, on or off campus have a .078 times less odds of persisting than Black males who never do.

Table 28

Logistic Regression to Predict Persistence (Clubs and Organizations Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
CLUBS2			6.929	3	.074			
CLUBS2(1)	1.772	.780	5.166	1	.023	5.884	1.276	27.126
CLUBS2(2)	1.012	1.030	.964	1	.326	2.750	.365	20.706
CLUBS2(3)	2.812	1.633	2.966	1	.085	16.643	.678	408.407
CLUBS4			8.846	3	.031			
CLUBS4(1)	2.287	.947	5.828	1	.016	9.843	1.538	63.017
CLUBS4(2)	2.906	1.557	3.485	1	.062	18.292	.865	386.775
CLUBS4(3)	-0.698	1.395	.251	1	.617	.497	.032	7.658
CLUBS5			6.471	2	.039			
CLUBS5(1)	-1.536	.842	3.323	1	.068	.215	.041	1.122
CLUBS5(2)	-2.549	1.052	5.873	1	.015	.078	.010	.614
Constant	1.402	.495	8.017	1	.005	4.065		

N = 144

## Personal Experiences

The Personal Experiences Scale measures the students' experiences with personal development. Examples include having discussions with others about personal matters, reading books or articles about personal growth, or asking someone about their perception of you as a person. For this scale, 31.17 percent of Persisters responded either Often or Very Often, while 20.25 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Personal Experiences score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Personal Experiences between Persisters and Non-persisters,  $t(146) = -3.136, p = .002$ . That is, the average Personal Experiences score for Persisters ( $M = 2.28, SD = .691$ ) was significantly different from that of Non-persisters ( $M = 1.93, SD = .633$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Personal Experiences Scale in predicting persistence. The final model is reported in Table 29. The full model ( $\Delta^2 = 190.551, p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 61.5 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients "goodness of fit" (chi-square = 11.388,  $df = 3, p = .014$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 4.945,  $df = 2, p = .551$ ) indicated that the full model is a good fit. The final model, as depicted in Table 29, is  $\text{Logit (Persistence)} = 1.175 (\text{PERS8 (1)})$ .

Black males who occasionally talk with a faculty member, counselor or other staff member about personal concerns have a 3.24 times higher odds of persisting than Black males who never do.

Table 29

Logistic Regression to Predict Persistence (Personal Experiences Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
PERS8			10.515	3	.015			
PERS8(1)	1.175	.397	8.772	1	.003	3.238	1.488	7.047
PERS8(2)	1.050	.863	1.480	1	.224	2.857	.527	15.504
PERS8(3)	1.520	1.138	1.784	1	.182	4.571	.492	42.518
Constant	.802	.363	4.891	1	.027	2.231		

N = 146

### Student Acquaintances

The Student Acquaintances Scale measures the students' interactions with peers and the quality of the interactions. Examples include getting acquainted with students that are different from you (different country, race, socioeconomic) and having serious conversations with students different from you. For this scale, 46.64 percent of Persisters responded either Often or Very Often, while only 27.78 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Student Acquaintances score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Student Acquaintances between Persisters and Non-persisters,  $t(146) = -4.092, p = .000$ . That is, the average Student Acquaintances score for Persisters ( $M = 2.53, SD = .647$ ) was significantly different from that of

Non-persisters (M = 2.11, SD = .553).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Student Acquaintances Scale in predicting persistence. The final model is reported in Table 30. The full model ( $\chi^2 = 201.889$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 64.2 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 16.585,  $df = 3$ ,  $p = .002$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 3.587,  $df = 2$ ,  $p = .610$ ) indicated that the full model is a good fit. The final model, as depicted in Table 30, is  $\text{Logit (Persistence)} = 1.625 (\text{STACQ9 (2)}) + 2.303 (\text{STACQ9 (3)})$ .

Black males who often and very often had serious discussions with students whose race or ethnic background was different from theirs have a 5.08 and 10.00, respectively, times higher odds of persisting than Black males who never do.

Table 30

Logistic Regression to Predict Persistence (Student Acquaintances Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
STACQ9			14.596	3	.002			
STACQ9(1)	.548	.599	.838	1	.360	1.730	.535	5.591
STACQ9(2)	1.625	.638	6.482	1	.011	5.077	1.453	17.733
STACQ9(3)	2.303	.837	7.574	1	.006	10.000	1.940	51.543
Constant	.426	.233	3.350	1	.067	1.531		

N = 146

## Scientific and Quantitative Experiences

The Scientific and Quantitative Experiences Scale measures the students' engagement and experiences with scientific aspects of campus. Examples includes showing another student how to use a microscope, explaining to another student why one scientific method is more appropriate than another method, or practicing to improve your skills in using a piece of equipment needed for an experiment. For this scale, 37.89 percent of Persisters responded either Often or Very Often, while only 20.31 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Scientific and Quantitative Experiences score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Scientific and Quantitative Experiences between Persisters and Non-persisters,  $t(146) = -3.297$ ,  $p = .001$ . That is, the average Scientific and Quantitative Experiences score for Persisters ( $M = 2.31$ ,  $SD = .690$ ) was significantly different from that of Non-persisters ( $M = 1.93$ ,  $SD = .699$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Scientific and Quantitative Scale in predicting persistence. The final model is reported in Table 31. The full model ( $\Delta^2 = 179.557$ ,  $p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775$ ,  $p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 68.2 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients "goodness of fit" (chi-square = 16.505,  $df = 3$ ,  $p = .001$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 1.265,  $df = 2$ ,  $p = .939$ ) indicated that the full model is a good fit. The final model, as depicted in Table 31, is  $\text{Logit}(\text{Persistence}) = 1.138 (\text{SCI3} (1))$ .

Black males who occasionally explain to another person the scientific basis for concerns about scientific or environmental issues (pollution, recycling, alternative sources of energy, acid rain) or similar aspects of the world around them have a 3.120 times higher odds of persisting than Black males who never do.

Table 31

Logistic Regression to Predict Persistence (Scientific and Quantitative Scale)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
SCI3			6.985	3	.072			
SCI3(1)	-.247	.534	.214	1	.644	.781	.274	2.226
SCI3(2)	1.218	.710	2.941	1	.086	3.380	.840	13.592
SCI3(3)	.593	.746	.632	1	.426	1.810	.419	7.806
SCI10			6.811	3	.078			
SCI10(1)	1.138	.440	6.685	1	.010	3.120	1.317	7.393
SCI10(2)	.891	.686	1.687	1	.194	2.438	.635	9.359
SCI10(3)	.705	1.028	.470	1	.493	2.023	.270	15.171
Constant	.623	.298	4.365	1	.037	1.864		

N = 146

Topics of Conversation

The Topics of Conversation Scale measures what the students discuss in conversations with others (peers, faculty, friends, or campus administrators). Examples include having conversations about some topic in the news, having conversations about computers and computer software, or having conversations about the economy. For this scale, 49.52 percent of Persisters responded either Often or Very Often, while only 25.88 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Topics of Conversation score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Topics of Conversation between Persisters and Non-persisters,  $t(146) = -4.518, p = .000$ . That is, the average Topics of Conversation score for Persisters ( $M = 2.57, SD = .653$ ) was significantly different from that of Non-persisters ( $M = 2.11, SD = .539$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Topics of Conversations Scale in predicting persistence. The final model is reported in Table 32. The full model ( $\Delta^2 = 173.054, p = .000$ ) is an improvement over the base model ( $\Delta^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 64.2 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 28.835,  $df = 6, p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test (chi-square = 6.985,  $df = 5, p = .222$ ) indicated that the full model is a good fit. The final model, as depicted in Table 32, is  $\text{Logit (Persistence)} = 1.684 (\text{CONTPTS10 (1)}) + 2.772 (\text{CONTPTS10 (2)}) + 3.663 (\text{CONTPTS10 (3)})$ .

Black males who occasionally, often and very often discuss topics related to international relations (human rights, free trade, military activities, political differences, etc.) have a 5.39, 15.99 and 38.97, respectively, times higher odds of persisting than Black males who never do.

Table 32

Logistic Regression to Predict Persistence (Topics of Conversation Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
CONTPS1			3.704	3	.295			
CONTPS1(1)	-1.924	1.178	2.668	1	.102	.146	.015	1.469
CONTPS1(2)	-1.939	1.205	2.589	1	.108	.144	.014	1.526
CONTPS1(3)	-1.380	1.295	1.135	1	.287	.252	.020	3.186
CONTPS10			14.139	3	.003			
CONTPS10(1)	1.684	.800	4.433	1	.035	5.389	1.123	25.847
CONTPS10(2)	2.772	.904	9.403	1	.002	15.989	2.719	94.032
CONTPS10(3)	3.663	1.131	10.479	1	.001	38.967	4.242	357.956
Constant	.858	.328	6.868	1	.009	2.359		

N = 146

#### Information in Conversations

The Information in Conversations Scale measures the quality of the conversations the students has with others. Examples include while in conversation the student makes reference to something discussed in class, as a result of a conversation the student reads an article or book to gain a better understanding of the topic, or the student persuades others to rethink or change their opinion about something. For this scale, 41.77 percent of Persisters responded either Often or Very Often, while only 21.95 percent of Non-persisters responded the same.

An independent-samples t-test was conducted to compare the mean Information in Conversations score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Information in Conversations score between

Persisters and Non-persisters,  $t(146) = -4.300, p = .000$ . That is, the average Information in Conversations score for Persisters ( $M = 2.50, SD = .620$ ) was significantly different from that of Non-persisters ( $M = 2.08, SD = .529$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Information in Conversations Scale in predicting persistence. The full model ( $\chi^2 = 175.025, p = .000$ ), as reported in Table 33, is an improvement over the base model ( $\chi^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 68.9 percent of cases, which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” (chi-square = 23.306,  $df = 3, p = .000$ ) also indicates an improvement over the base model. The Hosmer and Lemeshow Test (chi-square = 3.131,  $df = 2, p = .792$ ) indicated that the full model is a good fit. The final model, as depicted in Table 33, is  $\text{Logit}(\text{Persistence}) = 1.531$  (CONINF2 (2)) + 2.398 CONINF2 (3)). The results show that Black males who often and very often explore different ways of thinking about a topic of conversation have a 4.63 and 11.00, respectively, times higher odds of persisting than Black males who never do.

Table 33

Logistic Regression to Predict Persistence (Information in Conversations Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
CONINF2			20.257	3	.000			
CONINF2(1)	.218	.755	.083	1	.773	1.243	.283	5.464
CONINF2(2)	1.531	.768	3.978	1	.046	4.625	1.027	20.829
CONINF2(3)	2.398	.892	7.228	1	.007	11.000	1.915	63.178
Constant	.344	.244	1.977	1	.160	1.410		

N = 146

## Reading

The Read Scale measures the number of assigned text books and non-assigned books the student read over the prior year. Examples include: How many text books or other assigned books did you read over the past year? How many non-assigned books did you read over the past year?

An independent-samples t-test was conducted to compare the mean Read score for Persisters and Non-persisters. The results indicated that there was a statistically significant difference in Read score between Persisters and Non-persisters,  $t(146) = -4.993, p = .000$ . That is, the average Read score for Persisters ( $M = 2.59, SD = .567$ ) was significantly different from that of Non-persisters ( $M = 2.07, SD = .684$ ).

A backward stepwise logistic regression model was estimated exploring the usefulness of the Read/Write Scale in predicting persistence. The final model is reported in Table 34. The full model ( $\chi^2 = 173.994, p = .000$ ) is an improvement over the base model ( $\chi^2 = 200.775, p = .084$ ). The base model correctly predicted 57.1 percent of cases, while the full model correctly predicted 70.3 percent of cases which also indicates an improvement over the base model. The Omnibus Test of Model Coefficients “goodness of fit” ( $\chi\text{-square} = 20.530, df = 3, p = .000$ ) also indicates the improvement of the full model over the base model. The Hosmer and Lemeshow Test ( $\chi\text{-square} = 22.480, df = 2, p = .082$ ) indicated that the full model is a good fit.

Black males who read between 5 and 10 textbooks or assigned books and those who read between 10 and 20 textbooks or assigned books have a 7.70 and 4.83, respectively, times higher odds of persisting than Black males who read none.

Table 34

Logistic Regression to Predict Persistence (Read/Write Scale)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
READTXT			17.893	3	.000			
READTXT (1)	.755	.421	3.212	1	.073	2.128	.932	4.859
READTXT (2)	2.042	.501	16.580	1	.000	7.703	2.883	20.580
READTXT (3)	1.576	.745	4.470	1	.034	4.833	1.121	20.824
Constant	.498	.222	5.028	1	.025	1.646		

N = 146

#### Analysis Performed to Answer the Second Research Question

A logistic regression model was tested to answer the second research question posed in the study. The research question sought to identify student engagement factors from the CSEQ survey that make a statistically significant contribution in explaining the variance in persistence relative to Black male students. Multivariate logistic regression was utilized to assist in identifying the predictors. Backward stepwise procedure with likelihood ratio was the selection process used in this step.

The results of the analysis are presented in Table 35. The final model ( $\chi^2 = 155.462$ ,  $df = 8$ ,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 196.252$ ,  $df = 1$ ,  $p = .068$ ). The final model correctly classifies 65.6 percent of non-persisters, 77.1 percent of persisters, resulting in correctly classifying 72.2 percent overall. The student engagement scales making a statistically significant contribution in predicting persistence are Library and Course. The resulting logistic regression model is:  $\text{Logit (Persistence)} = 1.054 (\text{Library}) + 1.565 (\text{Course}) - 3.489$ .

The final model reveals the following information about Black males: For every one point increase in the mean Library Usage Scale score, the odds of Black males persisting increases by a factor of 2.868, all other factors being equal. For every one point increase in the mean Course Learning Scale score, the odds of Black males persisting increases by a factor of 4.782, with all other factors being equal.

Table 35

Logistic Regression for CSEQ Respondents Incorporating Engagement Scales

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Library	1.054	.483	4.756	1	.029	2.868	1.113	7.393
Course	1.565	.521	9.010	1	.003	4.782	1.721	13.284
Art	-.688	.399	2.964	1	.085	.503	.230	1.100
Write_SS	-.509	.310	2.705	1	.100	.601	.328	1.103
Constant	-3.489	.876	15.847	1	.000	.031		

N = 148

#### Analysis Performed to Answer the Third Research Question

A logistic regression model was tested to answer the third research question posed in the study. The research question sought to determine if the CSEQ provided an improvement above and beyond what traditional factors provide in assisting the institution to predict persistence of Black males. Multivariate logistic regression was utilized to assist in identifying the predictors. Backward stepwise procedure with likelihood ratio was the selection process used in this step.

The first step includes identifying the traditional factors having a statistically significant impact on predicting persistence for Black males completing the CSEQ survey. The results of the analysis are presented in Table 36. The final model ( $\chi^2 = 176.157$ ,  $df =$

1,  $p = .000$ ) is an improvement over the base model ( $\chi^2 = 201.889$ ,  $df = 1$ ,  $p = .072$ ). The final model correctly classifies 50.8 percent of non-persisters and 87.1 percent of persisters, resulting in correctly classifying 71.6 percent overall. The only traditional factor making a statistically significant contribution in predicting persistence is %AE. The resulting logistic regression model is:  $\text{Logit (Persistence)} = 3.298 (\%AE) - 1.925$ . According to the results, the following are true for Black males: For every one point increase in %AE, the odds of Black males persisting increases by a factor of 27.066, with all other factors being equal.

Table 36

Logistic Regression to Predict Persistence of Black Males (Traditional Factors)							95% CI for Exp(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
%AE	3.298	.735	20.141	1	.000	27.066	6.410	114.287
Constant	-1.925	.538	12.822	1	1.000	.146		

N = 148

The next step includes identifying the traditional factors and CSEQ scales having a statistically significant impact on predicting persistence for Black males. The final model ( $\chi^2 = 146.818$ ,  $df = 5$ ,  $p = .000$ ), as reported in Table 36, is an improvement over the base model ( $\chi^2 = 196.252$ ,  $df = 1$ ,  $p = .68$ ) and also an improvement over the model using only the traditional factors ( $\chi^2 = 176.157$ ,  $df = 1$ ,  $p = .000$ ). The final model correctly classifies 67.2 percent of non-persisters and 83.1% of persisters, resulting in correctly classifying 76.4 percent overall, which is also an improvement over the base model and the model using only the traditional factors. The resulting logistic regression model is:  $\text{Logit (Persistence)} = 2.524 (\%AE) + 1.157 (\text{Library}) + 1.254 (\text{Course}) - 4.249$ .

The final model reveals the following information about Black males: For every one point increase in %AE, the odds of Black males persisting increases by a factor of 12.484, all other factors being equal. For every one point increase in the mean Library Scale score, the odds of Black males persisting increases by a factor of 3.179, with all other factors being equal. For every one point increase in the mean Course Learning Scale score, the odds of Black males persisting increases by a factor of 3.504, with all other factors being equal.

Table 37

Logistic Regression for CSEQ Respondents (Traditional Factors and Engagement Scales)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
%AE	2.524	.840	9.037	1	.003	12.484	2.407	64.734
Library	1.157	.488	5.619	1	.018	3.179	1.22	8.273
Course	1.254	.562	4.976	1	.026	3.504	1.164	6.543
Personal	-.682	.415	2.698	1	.100	.506	.224	1.141
Write_SS	-.560	.321	3.048	1	.081	.571	.305	1.071
Constant	-2.613	50.997	.003	1	.959	.070		

N = 148

## CHAPTER FIVE

### DISCUSSION

Black male students face many obstacles in their attempts to earn a college degree. I focused on predominately White institutions because they are the school of choice for majority of Blacks choosing to attend college. Blacks face many issues among which include isolation, proving one's belonging, limited financial resources, academic preparation for college, and knowing someone on campus who can properly advise them on how to successfully navigate the college campus. Several of these issues become moot for Black males who have been admitted to a predominately White college or university and have decided to enroll. This study focused on those aspects of college life over which Black male students have some degree of control. Many of the recommendations require participation and involvement from peers, faculty, and administrators. Black males must establish and continually nurture relationships with individuals and groups on campus that can assist them in persisting. Developing these survival skills will serve the Black male immensely in his development and success as a college student and in life thereafter.

Kuh et al., (2005) commented that what students do in college is more important to persistence than who they are and what college they attend; that philosophy adds credence to this study. The purpose of this study was to investigate the relationship between student engagement and student persistence relative to Black males attending a predominately White university in the South. In addition, this study sought to determine if student engagement, as measured by the CSEQ, significantly improved the institution's ability to predict persistence above what is currently known about Black male students. In my review of relevant literature, there were no studies providing practical advice to students or institutions on how to improve persistence. Tinto (2005) also articulated the importance of

and need for persistence studies that provide students and campus administrators with practical advice on how to persist.

This chapter provides a summary of the results of the study and makes recommendations to Black male students, faculty, and campus administrators on how to improve the persistence of Black males choosing to attend Kappa University. This chapter is organized by Summary of Results, Implications for Practice, and Recommendations for Future Research.

### Summary of Results

This section is presented in the following order: Campus Profile of Student Persistence, Engagement Patterns for Persisters and Non-persisters (in response to the first research question), Relationship Between Engagement and Persistence (in response to the second research question), and Relationship Between Traditional Factors, Engagement and Persistence (in response to the third research question).

#### Campus Profile of Student Persistence

The literature on student persistence and retention places little emphasis on identifying differences between groups. This study was conducted to explore the feasibility of investigating student persistence identifying the differences between the groups of Black and White students entering Kappa University in the fall 2003, fall 2004 or fall 2005 semester. I present the data by race and gender to determine if there are differences between groups in persistence patterns. The analysis of the data suggested that there are differences in statistically significant predictors of persistence using the traditional factors which includes high school GPA, college GPA, percent of hours attempted that resulted in the student earning a passing grade (%AE), and ACT scores.

In the analysis performed incorporating all Black and White students entering Kappa University as first-time, full-time, traditionally-aged, matriculates in the fall 2003, fall 2004 or fall 2005 semester, persisters consistently outperformed non-persisters in each of the traditional factors. For the group as a whole, high school GPA (HS\_GPA) was the only statistically significant predictor. Knowing the student's high school grade point average can assist the institution immensely in admissions decisions and possibly course placement decisions, but has limited use in the context of this study. This background information, such as ACT scores and high school GPA, are static and can not change, therefore, provides limited benefit to the admitted and enrolled college student in advising the student on how to improve his chances of persisting. It does, however, advise him and the institution of his risk factor and the need to seek assistance to improve his chances of college success.

The analysis of all Black and White females resulted similarly. High school grade point average and the ACT composite score were the two predictors making a statistically significant contribution in predicting persistence for this group. When this group was analyzed by race, differences began to emerge. The predictors making a statistically significant contribution in predicting persistence for Black females were the percent of hours attempted in which a passing grade was earned (%AE) and the college cumulative GPA, while the statistically significant predictors for White females were college cumulative GPA, percent of hours attempted in which a passing grade was earned (%AE), high school GPA, and the English sub-score of the ACT. These findings may be used to provide advice to Black and White females attending Kappa University on how to improve their chances of persisting. Their odds of persisting will increase if both groups improve

their college grade point averages and earn passing grades in a higher percentage of enrolled classes.

The analysis of all Black and White males also identified differences in predictors of persistence between the two groups. The significant predictors of persistence for Black and White males were college cumulative GPA, percent of hours attempted in which a passing grade was earned, high school GPA, reading sub-score of the ACT, and the ACT composite score. Slight differences began to emerge when males were segregated by race. Predictors making a statistically significant contribution in predicting persistence for Black males are percent of hours attempted in which a passing grade was earned and college cumulative GPA. These are two factors that Black males have considerable control over. Predictors making a statistically significant contribution in predicting persistence for White males are percent of hours attempted in which a passing grade was earned, English sub-score of the ACT, and the college cumulative GPA. Again, White males are presented with a persistence model for which he has considerable control over at this point in his academic career with the exception of ACT score.

In a review of each group individually, common threads begin to emerge. The common statistically significant predictors included in each individual group's persistence model are percent of hours attempted in which a passing grade was earned (%AE) and college cumulative GPA. This information presents some hope for improving persistence for each group. This information is hidden when the analysis is performed on the entire group. One potential reason to search for significant predictors for the entire group is costs. A persistence plan that can be applied to all students may be more cost-effective and easier to implement than a persistence plan that addresses the needs of each group individually. My approach is an improvement over the most prevalent research conducted

to understand persistence decisions including all students in one persistence model. Kuh et al., (2005) and Tinto (1993) emphasizes the importance of addressing the individual needs of students in attempts to improve their chances of success.

#### Engagement Patterns for Persisters and Non-persisters

The analysis revealed that there are statistically significant differences in engagement patterns between Black males who persisted and those who did not persist at Kappa University. A higher percentage of Black male persisters indicated that they were more engaged than non-persisters in each of the student activity scales. This information is valuable to Black males attending Kappa University and campus administration. A deeper understanding of how to better engage Black males in educationally purposeful activities is warranted.

Kuh et al. (2005) posits that what students do in college has more of an influence on what they learn and whether they will persist than who they are and where they go to college. The time and energy students devote to educationally purposeful activities is the single best predictor of personal development and learning, which includes persistence. Kuh incorporated Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education in his model of student engagement. The good practices include student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning. Kuh further articulated the goals of higher education as to produce graduates that can think critically, solve unscripted problems, communicate effectively, and are responsible citizens. If students write more papers, read more books, meet more frequently with faculty and peers, and use information technology often and appropriately we will realize greater gains in goals of higher education.

Kuh et al. (2005) organized the student engagement activities into five clusters. The five clusters are level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences, and supportive campus environment. The findings for this study are presented by the five clusters. While Black males should engage in as many of the activities measured in the CSEQ as possible, activities identified in this study are explicitly listed in each cluster as important activities for this group.

#### Level of Academic Challenge

Challenging intellectual and creative work is central to learning and institutional effectiveness (Kuh et al., 2005). When expectations are set at a high level, students generally meet or exceed the challenge. What is most important in setting high expectations is to provide students the support needed to meet the expectations. In a study conducted by Kuh et al., (2005), colleges and universities that have experienced success in encouraging their students to meet high expectations established standards for achievement consistent with their student's academic preparation at levels that require them to grow academically. The items identified in the results as statistically significant in this cluster are reading and writing, working harder as a result of feedback from an instructor, and preparing for class.

#### Active and Collaborative Learning

Kuh et al. (2005) found that an active and collaborative approach to teaching and learning improved student success. Students will learn more and therefore improve their chances of persisting if they are intensely involved in their education by doing things such as contributing to class discussions (Kuh et al., 2005).

The active and collaborative learning cluster is framed with the premise that students learn more and benefit more when they are intensely involved in their education and have opportunities to reflect and apply what they are learning in meaningful ways. Kuh et al. (2005) further noted that when students collaborate with others in solving problems, they develop valuable skills that prepare them to successfully engage with messy, unscripted problems they will encounter in life during and after college. Specific activities identified as important to Black males are asking questions in class and contributing to class discussions, explaining your understanding of some scientific or mathematical theory, principle, or concept to someone else, incorporating information about international relations into their conversations at every opportunity, and discussing ideas from readings or classes with others.

#### Student Interaction with Faculty

Providing opportunities for students to work with faculty members on a project or on a committee together lets students see first-hand how experts identify and solve practical problems (Kuh et al., 2005). Interactions between faculty and students are essential to quality learning experiences. Student-faculty interactions can be increased and enhanced through undergraduate research, advising, and electronic technology, just to name a few. Specific activities identified in this study as important to Black males are seeking advice from faculty on matters related to their program of study and course selection, meeting with a faculty member or staff advisor to discuss the activities of a group or organization, and getting prompt feedback on academic performance.

#### Enriching Educational Experiences

Educationally effective colleges and universities offer many opportunities for growth and development both inside and outside the classroom (Kuh et al., 2005). Many such

opportunities include community service, internships, and capstone courses that provide students with opportunities to synthesize, integrate, and apply their knowledge (Kuh, et al., 2005). Kuh also found that because of these experiences, learning is deeper and more meaningful because they were actively involved in the learning process. Specific activities identified in this study as important to Black males are having serious discussions with students whose race or ethnic background was different from yours, and using technology to communicate and improve information literacy skills.

### Supportive Campus Environment

Kuh et al., (2005) articulated that students perform better at colleges and universities that are committed to their success and at schools that promote and encourage interactions among different groups. Institutions that have experienced success in increasing student engagement have provided the necessary resources to students when needed and create conditions that encourage students to avail themselves to the resources. These successful institutions have also created a campus environment that supports and encourages cordial and helpful relationships among student, faculty, and administrators. Specific activities identified in this study as important to Black males are those that create opportunities for Kappa University to respond is the importance of the library, meeting students at some campus location for a discussion, and meeting with faculty members for various reasons.

### Relationship Between Engagement and Persistence

When exploring the relationship between student engagement and student persistence using all engagement scales, the analysis revealed student engagement is important in predicting persistence for Black males attending Kappa University. The first research question emphasized the importance of each student engagement scale individually in predicting persistence for Black males attending Kappa University. A review of the results

entering all engagement scales into the model simultaneously identifies Library Usage and Course Learning as the two statistically significant scales when the combined effects of the scales is explored.

Access to information plays an important role in the persistence of Black males at Kappa University and should continue to be a high priority for campus administrators. Many institutions have some formal introduction to campus for prospective and incoming students. Knowing the important role information literacy plays on campus in the student's learning and development, particularly for Black males, campus administrators should consider introducing new students to the library and other information sources at events and programs that introduce new students to campus such as freshman orientation or during freshman seminar. Black males should also be cognizant of the importance of information literacy and take full advantage of campus resources that can provide a wealth of information such as the library. Examples of the types of activities Black males should engage in relative to the library are use the library as a quiet place to read or study materials, ask a librarian or staff member for help in finding information on some topic, used an index or database to find material on some topic, develop a bibliography or reference list for a term paper or other report and make a judgment about the quality of information obtained from the library, World Wide Web, or other sources. These activities are examples of the types of interactions and engagements that improve and illustrate student motivation to succeed. Each activity demonstrates the student's effort to engage in activities necessary for success. Faculty should use every opportunity to develop information literacy skills and the use of campus information resources such at the library for all students, particularly in the case of Black males.

Kuh et al. (2005) found that an active and collaborative approach to teaching and learning improved student success. Black male students will improve their chances of persisting if they engage in active learning activities such as completing the assigned readings for class, take detailed notes during class, contribute to class discussions, try to see how different facts and ideas fit together, summarize major points and information from class notes or readings, and work on a paper or project where you have to integrate ideas from various sources. Faculty should be cognizant of the importance of active and collaborative teaching and learning on student success particularly for Black males and incorporate active learning into the classroom. Tinto (1993) is a strong advocate for learning communities as an active learning strategy. Learning communities embody many of the attributes of active learning by actively engaging the student with peers in a common goal and purpose. Other such opportunities are research projects and reports and papers that require a collaboration of thought and ideas.

#### Relationship Between Traditional Factors, Engagement and Persistence

There is a statistically significant relationship between the traditional persistence predictors, student engagement, and student persistence for Black male students attending Kappa University. The CSEQ adds value or significantly improves the institution's ability to predict persistence for this group of students.

The third research question sought to determine if student engagement provided additional insight into the persistence of Black males above and beyond what is currently known using traditional factors. Using only the traditional factors as input to the persistence model for this group identified the percent of hours attempted in which a passing grade was earned as the only statistically significant predictor. The next step in the analysis, which incorporated the traditional factors and student engagement factors,

indicated that the student engagement factors provided more insight into persistence for this group of students above what is known using only the traditional factors.

The variables that were identified as significant were the Library Usage Scale, Course Learning Scale, and the percent of hours attempted in which a passing grade was earned. This information provides excellent advice to Black male students because these are areas over which they have considerable control. In the final persistence model, using the student engagement factors and traditional factors as input, the percent of hours attempted in which a passing grade was earned (%AE) was the only traditional factor identified as making a statistically significant contribution in explaining persistence for Black males. There are several ways to improve the percentage of passing grades earned, but two popular strategies consists of decreasing the number of classes dropped and decreasing the number of failing grades earned. An improvement in both areas is important to students and the institution.

Decreasing the number of classes dropped appears to be the most amenable option at this time. Kappa University does not currently limit the number of classes a student can drop or receive a failing grade before some intervention is applied or some penalty is imposed. Dropping classes not only influences persistence, but can also delay graduation. This can be a dilemma for the student and the institution. Delayed graduation, from a student perspective, also delays the time in which the student could begin earning the expectant salary based on attaining a college degree. It could also mean more debt for students who rely on loans to pay educational expenses. From an institutional perspective, delayed graduation impacts the graduation rates. Graduation rates impact institutional rankings, the institutions ability to effectively manage its student body enrollment, and could have a detrimental effect on recruitment. A college with low graduation rates may

not be as attractive to prospective students considering several colleges to attend. Kappa University may want to consider limiting the number of classes a student can drop annually and cumulatively. The institution may also want to consider limiting the number of failing grades a student can earn before some form of intervention is imposed.

Learning and student development is important to student success and satisfaction (Kuh et al., 2005). The importance of the course learning scale emphasizes the importance of what happens in the classroom and faculty expectations of students. Activities include:

- completed the assigned readings for class
- took detailed notes during class
- contributed to class discussions
- developed a role play, case study, or simulation for a class
- tried to see how different facts and ideas fit together
- summarized major points and information from your class notes or readings
- worked on a class assignment, project, or presentation with other students
- applied material learned in a class to other areas
- used information or experience from other areas of your life
- tried to explain material from a course to someone else
- worked on a paper or project where you had to integrate ideas from various sources

Faculty have the most opportunities to engage students, particularly for a commuter campus like Kappa University. Approximately 20 percent of students attending Kappa University live in campus residences. This presents even more challenges for the university to get students to participate in activities outside of what happens in the classroom. This is another reason much of the responsibility for engaging students on this

campus falls on the shoulders of the faculty. This does not minimize or remove the responsibility of student affairs personnel to create opportunities for engagement outside the classroom, but often the only real opportunity or the only regular contact with Black males with any real opportunity to encourage engagement is the classroom. It is for these stated reasons it is no surprise that the difference maker in persistence is what happens in the classroom.

Information literacy was also important to Black male student persistence at Kappa University. The library is an example of the type of campus resource that can be utilized as a tool to improve information literacy. The library plays host to a voluminous amount of information and material, access to numerous databases, facilities for meeting with peers, a quiet place for reading and studying, provides access to computers and the internet, and access to printers and copiers. Many of these resources are provided to students at Kappa University free of charge and are not readily available in one location elsewhere; therefore students use the library for access and more. Black male students who read more books were also identified as more likely to persist. Students with an affinity for reading can not only find a quiet place in the library for reading, but have free access to many other reading materials in the library. Information literacy continues to serve as an important aspect of the college experience, particularly for Black male students and engagement at Kappa University.

#### Implications for Practice

The vast majority of the literature on student persistence and retention identified important factors that pertained to all students in general and often did not attempt to identify differences among groups. Estimating a student success model that applies to the entire student body may be the most cost-effective approach to seeking solutions, but may

not identify underlying issues affecting segments of the student body. A more appropriate approach may be to delve deeper and explore similarities and differences between groups. While my study did not collect student engagement data on the entire campus and every student group, I did collect data on traditionally-used factors for Black and White students to make group comparisons. While the analysis did reveal some common threads, differences did emerge. Fries-Britt (2002) and Tinto (1993) identified differences in how groups negotiate the college campus, which also emphasizes the importance of exploring differences when conducting research on students.

Much of literature on student persistence and retention included background factors in the analysis such as socioeconomic status, high school grade point average, ACT or SAT scores, college grade point average, race, and gender. Many studies were designed to gain a better understanding of persistence decisions. Although background information is useful in admissions decisions and college course placement, it provides limited use in advising students on what types of activities increase their chances of persistence. This information also provides limited advice to faculty on how they can assist students in persisting. Regularly having discussions with faculty about class, school, or non-school interests improves the Black male's chances of persisting (Kuh et al., 2005). This information also provides limited advice to campus administrators on the types of programs, services, and facilities they should invest in to improve the persistence and graduation rates of their students. The CSEQ provides valuable information to each group on how to improve persistence for Black male students at Kappa University.

This study identified the interaction effects of the student engagement scales that identified the importance of library usage, course learning, and the percentage of classes enrolled in which a passing grade was earned. Institutions must continue to invest in

libraries and support to faculty necessary to improve student success. Students must remember that persistence is, at a minimum, a shared commitment. It involves a commitment from students to do everything within their power to improve their chances of success and a commitment from the institution to provide the necessary support and programs that students, faculty, and administrators need to improve student success.

My data challenges may also be an indication of measures and approaches necessary to reach this population of students. While surveying in general can be a challenging process, surveying this group revealed much about conducting surveys for Black males attending Kappa University. I did not experience much success in collecting the necessary data until I began to call Black males students and former students at home, which brought many parents into the process. When I was successful reaching the students at home, they were more than willing to devote 30 to 40 minutes to the data collection process over the telephone. The students and former students and their parents, with the vast majority of parents I spoke to being mothers, were also very pleased that somebody took an interest in their college success. It seemed for several of them that nobody associated with the institution really cared if they were attending or not. Kappa University and postsecondary institutions in general may need to adopt a more personalized approach to reaching these students and assisting them in being successful in college. Maybe this form of intervention will improve their success rates and their impressions of the institutions level of concern over their success.

#### Recommendations for Further Study

The study revealed the importance of student engagement in student persistence for Black males attending Kappa University. The study can be extended by conducting

interviews of Black males who responded differently to questions on the survey than the average Black male respondent attending Kappa University.

This study should be extended and explore the relationship between student engagement and persistence for all groups of students attending Kappa University. This information may prove valuable to students and campus administration on the impact of student engagement on student persistence, and will help to identify the similarities and differences among groups. While institutions should make every attempt to improve the representation of different groups on campus, a more lasting and far-reaching approach would be to recruit faculty and administrators that are sincerely concerned about the success of all students and are willing to explore ways of helping all students succeed (Gonsalves, 2002).

Before conducting the telephone interview, I asked the non-persisters to provide me with the primary reason they left college. The reasons ranged from the need to get a job to cover living expenses, problems with financial aid, not studying enough to be successful, a feeling from peers and faculty that they did not belong in college, and simply not knowing how to handle problems that arise. Many felt that they could eventually earn a four-year degree and had plans to do so. As a result of my conversations, three students did return to campus in the fall 2006 semester and I have conversations with several siblings and friends of students who completed the survey in search of assistance. Based on my conversations, I realized that although the quantitative data revealed some very valuable information, interviews would probably provide a more in-depth view of the phenomena.

Another extension to this study could be to explore the relationship between high school student engagement and college level engagement. I would like to know if college engagement can be predicted by measuring student engagement at the high school level. If

there is a statistically significant relationship between high school engagement and college level engagement, this may add a new dimension to the college admissions decisions, particularly for students whose high school GPA and ACT scores are not at the level to earn admissions.

Another extension would be to study if student engagement is positively impacted by making students aware of best practices in student engagement and the subsequent benefits. This important study would provide even more insight into a study of the relationship between high school student engagement and college level student engagement and admissions decisions.

#### Limitations to the Study

There is not one-size-fits-all solution to student departure. While certain general characteristics can be attributed specifically to Black men attending Kappa University, Black men, in general, and no student population, is a monolithic body deplete of group differences. It is probably more cost-effective for institutions to find solutions to higher education issues that apply to a considerable subset of the student body. What must be emphasized at this juncture is that the best approach is to seek ways to personalize solutions to fit each student's individual needs (Tinto, 1993).

I collected survey responses from Black males who entered Kappa University in the fall 2003, fall 2004 or fall 2005 semester. For non-persisters their responses were retrospective in nature. Non-persisters were asked to recall experiences on campus that occurred in their past, in some situations one to two years ago, while persisters were asked to respond in reference to more recent campus experiences. The requirement to recall past experiences may not be as accurate as responses to current experiences.

Student persistence is a longitudinal process that gradually evolves into either being or not being (Tinto, 1993). The different ways students develop and the multitude of ways the campus impacts student success changes as the student matures and adapts to the college campus. My view in this study is a snapshot of one point in time for the participants and does not capture the longitudinal effects and influences. Conducting a longitudinal quantitative analysis requires obtaining a minimum one hundred participants per cohort.

### Conclusions

The study provides practical advice to Black male students, faculty, and campus administrators on how to improve persistence for this group. Kuh et al. (2005) found a positive correlation between student engagement and student success with student persistence being one of the components along with learning and student satisfaction. Kiljatic and Kuh (2001) conducted a study to measure the longitudinal effects of student engagement. The researchers found that student engagement in good educational practices has not changed significantly over the past fifteen years. Even with all of the recent attention to encourage faculty to adopt good educational practices, student engagement remains unchanged. What is encouraging is that the overall level of engagement has not decreased even with the increased number of students enrolling in college (Kiljatic & Kuh, 2001).

Graduation rates are another area for concern. The end result of improved persistence is improved graduation rates. Even with all of the attention on the importance and benefits of earning a college degree, graduation rates have not changed significantly over the past century (Swail, 2004). Swail commented that six-year graduation rates have averaged around 50 percent over the past century. The good news is that while the rates have remained stagnant, the number of high school graduates entering college has steadily

increased. Therefore, the number of students earning college degrees annually has also steadily increased.

What does all of this mean? This study provides Black males with practical advice on how to persist, but will it make a significant impact on student persistence? Lessons learned about the positive impact awareness has on subsequent human behavior would make one feel positive about the possibilities. Just as the promotion of college with increased salary earning potential along with other benefits has increased demand for attending college, the promotion of practical ways to improve the student's chances of earning a degree will improve student engagement, persistence and graduation rates.

As much as I want to empower Black males to take control of their persistence, most of the student engagement scales rely on student-faculty interactions and peer-to-peer interactions. Black males will need the assistance of the institution, faculty, and their peers to truly maximize engagement. Faculty must continue to explore ways to more actively engage students in activities that promote student success and institutions must increase support to faculty (Kuh, et al., 2005; Swail, 2004).

This study shows, at least for Black males attending Kappa University, that student engagement matters and makes a significant difference in persistence. Student engagement was more important to student persistence for this group than any of the background factors traditionally used at Kappa University and many other institutions to predict student persistence and graduation.

This study does not diminish the importance of high school GPA, college GPA, and ACT scores on student success. High school GPA and ACT scores are reliable measures of preparation for college (Kuh, et al., 2005). This study revealed that high school GPA is a better measure of preparation and readiness for college, at least for this cohort of Black

males, than ACT scores. Black males must remember that high school GPA and ACT scores are important admissions criteria at Kappa University and most institutions of higher education in America because of their ability to measure preparation for college. Preparation and motivation have been identified as the two most important predictors of student success in college (Kuh, et al., 2005). ACT scores and high school GPA may also determine course placement in college. Students demonstrating a need for further development before engaging in college level courses can possibly extend their college career and the associated expenses by having to take remedial coursework. High school GPA and ACT scores are also used by many institutions for determination of scholarship eligibility.

What is encouraging about this study is that after Black males have been admitted to Kappa University, background factors have less of an impact on student persistence than what the student does in college. Another important part of the persistence puzzle is institutionally related. Kuh et al. (2005) insisted that the institution must “allocate resources and organize learning opportunities and services to induce students to participate in and benefit from such activities” (p. 9). Programs and interventions such as mentoring, learning communities, academic advising, freshman orientation, senior capstone course, undergraduate research, and supplemental instruction have proven to be successful strategies for increasing student engagement, adjustment, and success.

Kappa University has a mentoring program that began in the fall 2006 semester. The program targets incoming freshman deemed “at risk” of leaving college before earning a college degree. The program could be modified to include all entering Black males. Anecdotal information received during telephone interviews revealed that many

non-persisters could have been retained had there been a support system in place such as knowing someone on campus to go to for assistance and advice.

Kappa University requires all incoming freshman to attend a freshman orientation. During freshman orientation, incoming students are introduced to aspects of campus deemed critical to their success. A modification to this program might be to include sessions specifically designed for Black males to educate them on what to expect in college and maybe use this opportunity introduce them to the mentoring program and possibly their mentor.

Kappa University offers limited opportunities for students to participate in learning communities. The university may want to consider requiring all entering Black male students to participate in a learning community and design learning communities that are of interest to them.

Kappa University requires all students to meet with an academic advisor each semester prior to scheduling classes. The university may consider adopting assessment tools to measure the effectiveness of academic advising. Assessment tools can provide feedback to academic advisors informing them of the success of their advisees by providing them reports of their course drop and persistence patterns. Advisors that have an unacceptable percentage of advisees exhibiting high course drop rates and low persistence rates may be targeted for training and professional development on how to improve their advising skills, particularly for those with Black male advisees. Another important aspect of advising is to review early warning signs that may indicate that the student is having difficulty and may be in need of assistance.

Another piece of anecdotal information derived in the telephone interviews is that several Black male non-persisters indicated that they could have done a better job actively

seeking tutoring assistance when needed. Supplemental instruction is a tactic that can be utilized to improve students' academic success. One aspect of supplemental instruction that could prove beneficial in assisting Black male students is where the tutor attends the same classes as students seeking tutoring. At Kappa University many students struggle with college algebra. Several of the Black males interviewed mentioned their struggles with math at Kappa University. In supplemental instruction, tutors attend the same classes and hear the same lectures and instruction students are receiving. Attending the same classes and hearing the same information as students provides tutors with specific issues students are facing and awareness of faculty expectations. Supplemental instruction also provides an opportunity for the tutor to provide feedback to faculty on pedagogy effectiveness and suggestions on how to improve student learning and success. Kappa University currently uses supplemental instruction on a limited basis. I highly recommend a more extensive use of supplemental instruction as I described. Kappa University may want to consider identifying course subjects and faculty in which a high number of students experience academic difficulty and seek tutoring, particularly Black males, and incorporate supplemental instruction.

Black males at Kappa University now have more practical advice on how to persist and faculty and administrators are now more aware of how to improve persistence for this group. The path to success will be different and unique for each Black male student, but this study provides insights into ways to improve the Black male students' ways of persisting by providing a repertoire of practical ways to become more engaged. Knowledge is empowering and for there to be progress and improvement in persistence rates of Black males, action must follow.

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APPENDIX A. SURVEY INSTRUMENT (CSEQ, 4<sup>th</sup> EDITION)



# College Student Experiences Questionnaire

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

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

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

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

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

**Thank you for your cooperation and participation!**

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

# BACKGROUND INFORMATION

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

## Age

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

## Sex

- male  
 female

## What is your marital status?

- not married  
 married  
 divorced  
 separated  
 widowed

## What is your classification in college?

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

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

- started here  
 transferred from another institution

## Where do you now live during the school year?

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

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

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

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

- yes  
 no

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

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

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

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

## Did either of your parents graduate from college?

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

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

- yes  
 no

## How many credit hours are you taking this term?

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

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

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

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

	↓ ON-CAMPUS	↓ OFF-CAMPUS
None; I don't have a job	<input type="radio"/>	<input type="radio"/>
1 - 10 hours a week	<input type="radio"/>	<input type="radio"/>
11 - 20 hours	<input type="radio"/>	<input type="radio"/>
21 - 30 hours	<input type="radio"/>	<input type="radio"/>
31 - 40 hours	<input type="radio"/>	<input type="radio"/>
More than 40 hours	<input type="radio"/>	<input type="radio"/>

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

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

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

	None	Very Little	About Half	More Than Half	All or Nearly All
Self (job, savings, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse or partner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scholarships and grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

## COLLEGE ACTIVITIES

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

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

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

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

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

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

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

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

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

# CONVERSATIONS

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

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

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

# READING/WRITING

During this current school year, about how many books have you read? Fill in one response for each item listed below.	Number of Books				
	None	Fewer than 5	Between 5 and 10	Between 10 and 20	
	Textbooks or assigned books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Assigned packs of course readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Non-assigned books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During this current school year, about how many exams, papers, or reports have you written? Fill in one response for each item listed below.	Number of Exams/Papers/Reports				
	None	Fewer than 5	Between 5 and 10	Between 10 and 20	
	Essay exams for your courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Term papers or other written reports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# OPINIONS ABOUT YOUR COLLEGE OR UNIVERSITY

**How well do you like college?**

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

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

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

# THE COLLEGE ENVIRONMENT

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

## Emphasis on developing academic, scholarly, and intellectual qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

## Emphasis on developing aesthetic, expressive, and creative qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

## Emphasis on developing critical, evaluative, and analytical qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

## Emphasis on developing an understanding and appreciation of human diversity

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

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

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

## Emphasis on developing vocational and occupational competence

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

## Emphasis on the personal relevance and practical value of your courses

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

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

## Relationships with other students

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

## Relationships with administrative personnel and offices

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

## Relationships with faculty members

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

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APPENDIX B. IRB REVIEW FORM (UL LAFAYETTE)

<b>MEMORANDUM</b>	<b>The University of Louisiana at Lafayette</b>
	<b>Institutional Review Board</b>
<b>I.R.B. Number: 00001474</b>	<b>FWA Number: 00000758</b>
<b>to:</b>	<b>Mr. DeWayne Bowie</b>
<b>from:</b>	<b>Evelyn M. Wills, Ph.D., R.N., Professor, IRB Chair</b>
<b>re:</b>	<b><u>Approval of Proposal (Sp06-009REG) Using Multivariate Logistic Regression Analysis to Predict Black Male Student Persistence at a Predominantly White Institution: An Approach Investigating the Relationship between Student Engagement and Persistence</u></b>
<b>date:</b>	<b>February 2, 2006</b>

Your addendum to the named review has been received and approved.  
Level of original application: XX Expedited \_\_\_ Full.

Just a reminder that your approval is for a single year, if your data collection extends beyond one year from the approval date on the application, then resubmission of the full application with any changes in subjects, data collection procedures or forms, or treatments specified will be necessary.

If, however, there are any changes in your data collection procedures, treatments, or subject population, please inform the IRB Chair in writing since substantive changes in the project will need to be reviewed (Form accompanies this approval).

If there is any type of injury to any participant of this research you must notify the IRB within 24 hours. Failure to inform the IRB of injury to participants is grounds for suspension of the research.

When your project is complete, please contact the IRB chair to document the completion of the study using the enclosed form.

We wish you well with your project. If you have any questions, please call me at 482-5607.

from the desk of...Evelyn M. Wills, Ph.D., R.N.  
Professor, Nursing  
University of Louisiana at Lafayette  
P.O. Box 43810  
Lafayette, LA 70504-3810  
(337) 482-56078 email: [ewills@louisiana.edu](mailto:ewills@louisiana.edu)

APPENDIX C. IRB REVIEW FORM (LSU)

IRB #: 3222 LSU Proposal #: \_\_\_\_\_

Revised: 04/15/2005

LSU INSTITUTIONAL REVIEW BOARD (IRB) for  
HUMAN RESEARCH SUBJECT PROTECTION

578-8692 FAX 6792  
Office: 203 B-1 David Boyd Hall

**APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT**

Unless they are qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/projects using living humans as subjects, or samples or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

Instructions: Complete this form.

Exemption Applicant: **If it appears that your study qualifies for exemption send:**

- (A) Two copies of this completed form,
- (B) a brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts A & B),
- (C) copies of all instruments to be used. If this proposal is part of a grant proposal include a copy of the proposal and all recruitment material.
- (D) the consent form that you will use in the study. A Waiver of Written Informed Consent is attached and must be completed only if you do not intend to have a signed consent form.
- (E) Certificate of Completion of Human Subjects Protection Training at <http://cme.cancer.gov/clinicaltrials/learning/humanparticipant-protections.asp>. (Unless already on file with the IRB.)

to: ONE screening committee member (listed at the end of this form) in the most closely related department/discipline or to IRB office.

If exemption seems likely, submit it. If not, submit regular IRB application. Help is available from Dr. Robert Mathews, 578-8692, irb@lsu.edu or any screening committee member.

Principal Investigator DeWayne K. Bowie Student? Y Y/N

Ph: 337-482-6298 E-mail: dkbowie@louisiana.edu Dept/Unit ELRC

If Student, name supervising professor Dr. S. Kim MacGregor Ph: (225) 578-6900

Mailing Address P. O. Box 41208 Lafayette, LA 70504 Ph \_\_\_\_\_

Project Title Using Multivariate Regression Analysis To Predict Black Male Student Persistence

At A Predominately White Institution: An Approach Investigating The Relationship Between

Agency expected to fund project Engagement And Persistence.

Subject pool (e.g. Psychology Students) \_\_\_\_\_

Circle any "vulnerable populations" to be used: (children <18; the mentally impaired, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

I certify my responses are accurate and complete. If the project scope or design is later changed I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted.

PI Signature DeWayne K. Bowie Date 1/24/06 (no per signatures)

Screening Committee Action: Exempted \_\_\_\_\_ Not Exempted \_\_\_\_\_ Category/Paragraph \_\_\_\_\_

Reviewer TROUSDALE Signature [Signature] Date 1-29-06

**Part A: DETERMINATION OF "RESEARCH" and POTENTIAL FOR RISK**

Study exempted by  
Louisiana State University  
Institutional Review Board  
203 B-1 David Boyd Hall  
225-578-8692  
Robert C. Mathews, Chair

APPENDIX D. CONSENT FORM

**Title of Research Project:** Using Multivariate Logistic Regression Analysis to Predict Black Male Student Persistence at a Predominately White Institution: An Approach Investigating the Relationship Between Student Engagement and Persistence

**Purpose:** You are being invited to participate in a research project by DeWayne Bowie a Ph.D student at Louisiana State University A&M. This study will be conducted to investigate ways to improve persistence rates of Black males attending Kappa University. You were selected to participate in this study because you are a Black male that entered Kappa University as a first-time freshman in either the fall 2003, 2004, or 2005 semester. You are also in the category of either currently enrolled during the spring 2006 semester or not enrolled. I am inviting 400 Black males to participate. Your input is very important to the success of this study.

**Methods:** The participants will complete the College Student Experiences Questionnaire, Fourth Edition. The questionnaire will be completed online. Students without internet access will be mailed the paper questionnaire to be returned to DeWayne Bowie for inclusion in the analysis. I will also collect student background information such as ACT scores and high school grade point average from the Kappa University Office of Institutional Research to assist me in the analysis. This information will remain private and confidential.

**Potential Risks & Benefits:** The participant's identity will be protected by not using personally identifiable information in the study. The data provided by the Kappa University Office of Institutional Research will not contain social security numbers. I will use the institutionally assigned student identifier. The participant database will be stored in a computer that is password protected. The researcher is the only person that has the password. At the end of the study you will be mailed a report of the findings and

recommendations. This information will also be presented to the President's Council with recommendations on how to improve persistence of Black males attending Kappa University. This information will hopefully be helpful to you in providing you with practical advice on how to persist at Kappa University.

**Contact Information:**

DeWayne Bowie

Telephone: (337) 482-6298

E-mail: [dkbowie@louisiana.edu](mailto:dkbowie@louisiana.edu)

**Responsibilities and Obligations:** You are under no obligation to participate in this research; it is your choice whether to be a part of the study. There will be no bias or penalty from this agency, the State of Louisiana, Louisiana State University A & M or Kappa University if you decide not to participate or if you decide to stop participating in the research.

There is no particular benefit to you if you participate, but the researchers and the University may learn how to improve the persistence rates of Black male students. This project may better inform Kappa University and you how to persist at Kappa University.

The results of this research will be published in a dissertation and possibly in professional journals or books after it has been completed but no names or identifying information will be included. If you have any questions about this research or your participation in the study you are welcome to call or e-mail DeWayne Bowie.

**CONSENT:** By completing questionnaire, I acknowledge that I understand that I am participating in research and that the research has been explained to me so that I understand what I am doing. I understand that I may stop participating at any time.

APPENDIX E. INVITATION TO PARTICIPATE

Dear Kappa University Student or Dear Former Kappa University Student:

My name is DeWayne Bowie. I am pursuing a Ph.D. in Educational Theory, Policy, and Practice at Louisiana State University in Baton Rouge, Louisiana. I am writing you today to ask for your assistance. I am a Black male that is very concerned about the low persistence and graduation rates of Black males at the Kappa University and nationwide. I am conducting a study to better inform Black males attending the institution on how to be successful and graduate.

The six-year graduation rate of Black males at Kappa University is 16% while Black females, White males, and White females posted graduation rates of 32%, 34.4%, and 46%, respectively. As you can see, Black males have the lowest graduation rate of the four comparison groups. We must find ways to remedy this situation.

The questionnaire I need you to complete asks for background information, your opinions about aspects of your college experience that are important to this study and questions about how you spent your time during the your last semester of attendance at Kappa University. Please answer all questions referring to the current school year in reference to your last semester you were enrolled at Kappa University. It is very important that you answer every question to the best of your ability and recollection.

I want to personally thank you for taking the time to read this letter and hopefully find this study as important as I do. Please complete the online questionnaire by going to [www.cseq.org](http://www.cseq.org) before February 24, 2006.

Sincerely,

DeWayne Bowie

APPENDIX F. REMINDER E-MAIL AND POSTCARD

Dear Student/Former Student:

You were recently asked to participate in a research project studying the persistence of Black males attending the University of Louisiana at Lafayette. If you have not already done so, I hope you understand the importance of the study and complete the questionnaire by going online to [www.cseq.org](http://www.cseq.org) no later than March 9, 2006. If you have any questions please contact me directly at (337) 482-6286 or e-mail me at [dkbowie@louisiana.edu](mailto:dkbowie@louisiana.edu).

Thank you for taking the time to participate in this important study.

Sincerely yours,

DeWayne Bowie

Doctoral Candidate, LSU A&M

## VITA

DeWayne Kevin Bowie was born in Bakersfield, California, on July 9, 1961.

DeWayne's family moved to Jonesboro, Louisiana, and that is where he attended elementary, middle, and high school. He attended Northwestern State University in Natchitoches, Louisiana, in the fall 1979. He returned home in the spring 1980 to seek gainful employment to assist his parents in paying for his college expenses.

DeWayne returned to college in the spring semester of 1982 at the University of Louisiana at Lafayette (formerly the University of Southwestern Louisiana). He was an active member of the Union Program Council and was initiated into Kappa Alpha Psi Fraternity, Inc., in the spring semester of 1983. DeWayne became Polemarch of Theta Nu (UL's undergraduate chapter) in the 1985-86 academic year. DeWayne earned a Bachelor of Science Degree in computer science in May, 1988.

DeWayne began working at the University of Louisiana at Lafayette in November, 1990 in the Office of Student Financial Aid. DeWayne became the Associate Director in 1996 and Director in 1998. DeWayne entered the Master of Business Administration program at the University of Louisiana at Lafayette in the fall 1996 semester. He was invited to membership and joined Beta Gamma Sigma Honor Society for business majors in April 1999. He earned the master of business administration in the spring 2000 semester. DeWayne became the University Registrar in 2001.

DeWayne entered the doctorate program at Louisiana State University A & M in Baton Rouge, Louisiana, in the fall 2001 semester. DeWayne was very active while working on his doctorate. He was the President of the UL Lafayette Black Faculty & Staff Caucus, President-elect of the UL Lafayette Phi Kappa Phi National Honor Society, Board Member for the Lafayette Cajundome Commission, Member of the Steering Committee for

University Retention, and Member of the University Diversity Advisory Council. The degree of Doctor of Philosophy will be conferred on December 21, 2006.