

ABSTRACT  
EDUCATIONAL LEADERSHIP

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A CASE STUDY ON THE RELATIONSHIP BETWEEN FACTORS OF GRADUATE  
STUDENT ENGAGEMENT AND ACADEMIC ACHIEVEMENT AT A  
HISTORICALLY BLACK COLLEGE AND UNIVERSITY (HBCU)

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The purpose of the mixed method study was to examine the relationship between factors of graduate student engagement and academic achievement at a historically black college and university (HBCU). The independent variables were graduate student safety in the learning environment, graduate student to graduate student relationships, graduate student to faculty relationships, graduate students' self-efficacy, graduate students' motivation, graduate students' faculty mentoring, graduate students' integration, graduate students' study habits, and graduate students' use of technology. Qualitatively, correlational research was used to examine the extent of the relationship between

independent variables and academic achievement. Qualitatively, the phenomenological approach was used to investigate graduate student perceptions of engagement factors and academic achievement. The mixed method helped analyze the convergence between qualitative and quantitative data. Miller and Cameron (2011) found that the mixed method of research has been used widely and accepted in the field of Education.

The quantitative data were collected from 209 graduate students. The data content validity was checked with the Pearson  $r$  2-tailed correlation. The Pearson Correlation helped to test for a significant relationship between variables. Qualitative data were collected from the interviews of two graduate students from four different graduate departments equaling eight interview participants. One focus group with a minimum of three graduates was conducted from four different departments. A total of 16 graduate students participated in the focus groups. The researcher interpreted the statements from the interviews and focus groups and conducted a document analysis revealing codes and themes that were organized into an analysis matrix.

The findings revealed that there was a significant relationship between graduate students' safety in the learning environment and academic achievement. There was a significant relationship between graduate student to student relationships and academic achievement. There was a significant relationship between (a) graduate student to faculty relationships and academic achievement, (b) graduate students' self-efficacy and academic achievement, (c) graduate students' motivation and academic achievement, (d) graduate students' faculty mentoring and academic achievement, (e) graduate students' integration and academic achievement, (f) graduate students' study habits and academic achievement, and (g) graduate students' use of technology and academic achievement.

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## CHAPTER I

### INTRODUCTION

Many studies have agreed that institutions of higher learning are concerned with student engagement and learning outcomes. Korobova and Starobin (2015) viewed student engagement as efforts directed towards educational purposeful activities. Wong (2015) held that institutions were under internal and external pressures to clarify and report student learning outcomes. Student engagement has been analyzed as institutional leaders work tirelessly to meet educational goals and to achieve organizational missions (Wong, 2015). Hu (2011) agreed that student engagement is central to educational quality. The promotion of student engagement is an effective practice in the transformation of education. Student engagement is very important when considering educational outcomes such as academic performance and achievement (Hu, 2011).

Academic achievement can be a construct by many definitions. Prevatt, Li, Welles, Festa-Dreher, Yelland, and Lee (2011) contended that academic success had various measures such as academic skills, career decidedness, and psychological, emotional, and interpersonal or social factors. Korobova and Starobin (2015) defined academic achievement as the degree to which students achieve goals measure by assessment. Academic achievement, for the purpose of the study, centered on the academic achievement of African-American graduate students at a historically black college and university (HBCU). Korobova and Starobin agreed that academic success

could be defined by grades which are a quantitative summary of student success. The examination of engagement and grades for African-American graduate students has revealed some interesting findings.

HBCUs provide a family-like nurturing environment that helps African-American students develop academically (Shorette & Palmer, 2015). Nelson Laird, Bridges, Morelon-Quainoo, Williams, and Michelle (2007) explained how institutional climate and culture often played a role as students selected engagement levels. Students engaged at higher levels when performance was affirmed and perceptions of inclusion abounded. Connections between student engagement and success were quite extensive. Students from ethnic backgrounds were engaged via active learning and faculty interaction. The student outcomes for African-American students that attended HBCUs were quite significant (Nelson Laird, et al., 2007). The purpose of this study was to examine the relationship between factors of graduate student engagement and academic achievement at a HBCU.

### **Statement of the Problem**

The problem is the lack of student engagement experienced by some African-American graduate students at a HBCU in the Southeastern region of the United States. Duncan and Barber-Freeman (2008) held that HBCU students required a variety of activities such as a commitment to increased retention, strengthened learning, and the promotion of effective teaching practices. Palmer, Davis, and Maramba (2010) revealed from the National Survey of Student Engagement that engagement at HBCU has

narrowed in recent years. Engagement at HBCUs is required to achieve academic success (Palmer, Davis, & Maramba, 2010).

Harper, Carini, Bridges, and Hayek (2004) commented that research has neglected to exclusively consider the impact of HBCUs on providing education to African-American students. Insight into student engagement and outcomes at HBCUs has not been sufficiently represented in higher education literature (Harper, Carini, Bridges, & Hayek, 2004). “Little is known about how HBCU students spend their time and the extent to which they are actively engaged in educationally purposeful activities” (Harper, et al., 2004, p. 270). Harper et al. agreed that research has neglected to exclusively consider the impact of HBCUs providing education to African-American students.

The lack of academic engagement could lead to a lack of representation in the diversity of graduate students. Veal, Bull, and Miller (2012) explained that the unchecked retention rates of minority student can negatively impact the tissue of underrepresentation. Minority graduates are more likely to serve diverse populations, yet supply lags behind the trend of a growing minority population. Strategies may be required to meet the needs of today’s population (Veal, et al., 2012). Linda (2000) stated that leaders have acknowledged and recognized the disparity among students. The climate of graduate schools may affect student engagement which often affects graduate student retention.

Schulte (2002) agreed that factors which affect graduate student retention should be researched. Some of the most common factors in the climate included student

relationships with faculty and a sense of community. A proper climate can enhance the moral development of students (Schulte, 2002). Increased moral development may assist with peer interactions, social integrations, and student engagements while also assisting with higher levels of attrition. Talbert (2012) contended that peer interactions and student integration helped develop relationships, maintained the environment, and increased institutional commitment. These factors together may assist with reducing attrition. Students that typically develop a sense of belonging engage in the academic environment and feel comfortable working towards matriculation and program completion. The students' connection with the organization provides a great help with influencing students' persistence (Talbert, 2012).

Constantine (1995) held that in 1990, HBCUs produced and delivered 27% of the bachelor degrees to African-American students as compared to the lower rates in which black HBCU students dropped out. HBCU students persisted because of remedial course offerings and a supportive environment. Shorette and Palmer (2015) further stated that HBCUs are important to the landscape of higher education in the United States. Many HBCUs have admitted students that would not qualify otherwise, yet graduate students that possess critical assessment skills have continue in the educational process (Shorette & Palmer, 2015).

### **Purpose of the Study**

The purpose of this mixed method case study was to examine the relationship between the factors of graduate student engagement and academic achievement at a HBCU. Coupet and Barnum (2010) mentioned the graduation rates of HBCUs as



significantly lower than national averages. Low graduation rates pose a problem by increasing costs and decreasing institutional revenue (Coupet & Barnum, 2010).

Weathering hard times for an HBCU has been quite difficult due to the smaller endowments and larger numbers of disadvantages students (Williams, Betsey, Gasman, & Grant, 2010).

Engagement may have a relationship with graduation rates which may affect the opportunities and wages of students that do not graduate from HBCUs. Constantine (1995) noticed that HBCUs played an important role in the education African-American students. There was evidence of the increased economic returns for HBCU graduates. Research also revealed that HBCU graduates perform better in the labor markets and experienced higher wage values than non-HBCU graduates (Constantine, 1995).

Reeder and Schmitt (2013) contended that academic achievement for African-American students has attracted the attention of many internal and external constituents. Previous researchers have investigated different aspects of achievement at the individual and institutional level (Reeder & Schmitt, 2013), yet the area of academic achievement for graduate students at HBCUs will be impacted by the research. Flowers (2011) contended that academic achievement increases as self-efficacy increases. The self-efficacy of academic achievement played a mediating role in the success of students (Flowers, 2011). Van Camp, Barden, Sloan, and Clarke (2009) stated that HBCUs provide greater exposure to African-American academic role models, offering higher levels of faculty student interactions which were both important the students' academics and the personal concept of self. Academic self-concept refers to a concept of academic

ability and academic life, which is made up of things like effort, grades, peer evaluation, and study habits. “Attendance at HBCU has a positive influence on a student’s academic self–concept” (Van Camp et al., 2009, p. 458).

Reeder and Schmitt (2013) agreed that HBCU environments differ from others in ways that impede or facilitate achievement. Yet, other studies have found that the institution type had no effect on academic achievement (Reeder & Schmitt, 2013). A potential influence on academic achievement may be found in the factors of graduate student engagement. For an HBCU in the Southeast section of the United States, it is a worthwhile purpose to examine the relationship between factors of graduate student engagement and academic achievement.

### **Research Questions**

- RQ1. Is there a significant relationship between graduate students’ safety in the learning environment and academic achievement?
- RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?
- RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?
- RQ4. Is there a significant relationship between graduate students’ self-efficacy and academic achievement?
- RQ5. Is there a significant relationship between graduate students’ motivation and academic achievement?

- RQ6. How does graduate student faculty mentoring influence academic achievement?
- RQ7. How does graduate student integration influence academic achievement?
- RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?
- RQ9. Is there a significant relationship between graduate students' use of technology and academic achievement?
- RQ10. Which independent variable has the greatest relationship with academic achievement?
- RQ11. Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?

### **Significance of the Study**

This study provided many implications for Historically Black Colleges and Universities (HBCUs). Gasman and Commodore (2014) agreed HBCUs are significant in the organizations ability to provide an affordable education that strengthens students through community engagement and leadership training with a supportive Afrocentric curriculum. Engaged students can lead to positive impacts with students in the classroom and during employment. Gassman and Commodore also agreed that greater growth in job skills has been recorded as graduates from HBCUs continue to prepare for graduate and professional schools. The community is also a place that benefits from engaged students that graduate from HBCUs: "HBCUs were intensely involved in their

communities, often providing housing, daycare services, nursing, and informal education” (Gasman & Commodore, 2014). Shinde (2008) mentioned the significance of student engagement and retention. Student engagement can account for a 13% and 14% variance, respectively concerning grade point averages (GPAs) and persistence for first year students. Yet, African Americans had an increased probability of increasing retention during the second school year (Shinde, 2008).

Dwyer (2006) revealed that HBCUs have been a great asset for nearly 150 years, serving and graduating nearly 75% of African-American students before 1950. African-American graduates have decreased by 20% since the 1950s, but the retention rates of HBCUs has continued to measure at a higher rate than predominantly white institutions (PWIs). Graduates of HBCUs have matriculated with greater levels of self-confidence and student learning than students from PWIs (Dwyer, 2006). Student engagement, which can lead to higher retention, was also significant because, “Black students at HBCUs are more likely to report higher grade point-averages, better psychological development, greater satisfaction with campus activities and cultural support, and academic growth and maturity” (p. 38).

### **Summary**

Graduate student engagement at a HBCU in the Southern region of the United States may have a relationship with the students’ academic achievement. Chapter I provided an explanation of the background of the study and described the issues of engagement and academic achievement. The purpose of the mixed method case study

was to examine the relationship between the factors of graduate student engagement and academic achievement. The study's purpose, statement of the problem, significance, and research questions were used to examine the relationship between graduate student engagement and academic achievement. Chapter 2 provides a literature review that focuses on examining the relationship between factors of graduate student engagement and academic achievement.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

Hall and Closson (2005) contended that many complexities exist in the populations of graduate students at Historically Black Colleges and Universities (HBCUs). Hall and Closson stated, “The experiences of Black graduate students in the area of social adjustment, academic performance, and interactions with faculty were at best conflicting and often negative” (p. 29). Fountaine (2012) held that the role of HBCUs has been an important force in producing black graduates and professional degree recipients. According to the Institute of Educational Statistics (2015),

In 2010-11, nearly 46,000 degrees were conferred at HBCUs. There were 71 percent bachelor degrees and 16 percent master degrees. In 2010-11, African American graduate students from HBCUs earned 73 percent of the degrees conferred. Data also indicate that master’s and bachelor’s degrees earned by African American students from HBCUs have decreased. (para. 2)

Hall and Closson (2005) also mentioned how graduate programs have increased in size and diversity, yet the experience of graduate students has not been documented adequately. Studies on graduate students have discussed success at business and social work, yet research about black graduate students at HBCUs is very limited (Hall & Closson, 2005). Collins, Onwuegbuzie, and Jiao (2014) agreed that the reading ability of

black graduate students was a predictor of achievement. Learning academically requires process and product knowledge as active components to reflect student efforts for monitoring progress, setting goals, and making the necessary adjustments. Research tends to engage white graduate students, while only very little is known about African-American graduate students (Collins, et al., 2014).

### **Organization of the Review**

Researchers have for many years investigated the relationship between engagement and academic achievement. This review investigated the relationship between the factors of graduate student engagement to include (a) safety in the learning environment, (b) graduate student to graduate student relationships, (c) graduate student to faculty relationships, (d) graduate students' self-efficacy, (e) graduate students' motivation, (f) graduate students' faculty mentoring, (g) graduate students' integration, (h) graduate students' study habits, (i) graduate students' use of technology, and (j) academic achievement. Chapter II focuses on factors of graduate student engagement and academic achievement at a HBCU in the Southeastern United States. The literature review identifies the common theories in the field of engagement and achievement in order to evaluate, compare, and contrast different views on the theories relevant to the research topic.

### **Literature Review of the Variables**

#### **Dependent Variables**

**Academic achievement.** The academic achievement of graduate students served as the dependent variable for the study at a HBCU in the south eastern region of the

United States. Uqdah, Tyler, and DeLoach (2009) held that the academic achievement of black graduate students has been discussed in literature for the past four decades.

Guiffrida and Douthit (2010) concluded that the academic preparation of black students was the main reason of low academic achievement, yet other factors affect the students' chances of achieving academic success. Defreitas (2012) mentioned how African-American students may have experienced negative outcome expectations due to negative experiences based on socioeconomic or ethnic discrimination. Lower expectations were often attributed to external causes as the students believed that negative outcomes were not due to personal effort (Defreitas, 2012). Institutions may gain from building interventions around the factors that affect the academic achievement of black students (Gordon, Iwamoto, Ward, Potts, & Boyd, 2009). Gordon et al. conferred that the academic identification of students was important to academic success. Students with self-esteem tied to academic success and higher academic identifications possessed greater levels of motivation to perform academically. Researchers also agreed that the schools' identification of black students also impacted academic achievement.

Alienation often resulted in the student disconnecting self from academic performance (Gordon, et al., 2009). "Over time . . . academic achievement and engagement serve as significant predictors of changes in individual scholastic goals and attainment" (Lynch, Lerner, & Leventhal, 2013, p. 8).

For the purpose of this study, black graduate student academic achievement was viewed as the students' grade point average. Reeder and Schmitt (2013) mentioned how HBCUs have a relatively higher grading criteria and admission standards. Fountaine



(2012) explained graduate student outcomes as aggregate levels, but only a few studies have focused on the factors that influence student experiences while even fewer studies examine the factors that affect minority students. Strayhorn (2014) agreed that further research is needed to discover more information about the factors that correlate with academic achievement of black student at HBCUs.

The literature review also examined the relationship of the factors of student engagement to include (a) safety in the learning environment, (b) graduate student to graduate student relationships, (c) graduate student to faculty relationships, (d) graduate students' self-efficacy, (e) graduate students' motivation, (f) graduate students' faculty mentoring, (g) graduate students' integration, (h) graduate students' use of technology, and (i) graduate students' study habits. A large amount of literature has been published referring to student engagement and academic achievement.

Gentilucci and Muto (2007) held that the No Child Left Behind Act (NCLB) strongly encouraged leaders to be greatly concerned with the academic achievement of students. Leaders can no longer simply promise student reforms, but must demonstrate improvements in academic performance. Leaders must begin to focus on things that directly, indirectly, and significantly relate to student achievement (Gentilucci & Muto, 2007). As high school students attend college and graduate school, leadership in higher education must also be concerned with factors related to student engagement and achievement.

## **Independent Variables**

**Safety in the learning environment.** Safety in the learning environment as an independent variable was viewed as a construct of situations inside and outside of the classroom where students were not worried about physical or psychological harm, students were encouraged to participate, and students were comfortable actively engaging in academic or nonacademic activities (Meyer, 2009; Turner-Kelley & Torres, 2006; Samimy, Kim, Lee, & Kasai, 2011). According to Maslow (1939), the feelings of security are syndromes of feelings that are functions of each other. The character of safety feeling causes people to group feelings together as one unit, therefore viewing security as a label of wholeness. A syndrome of security feelings can be directed in a person's thoughts, feelings, or actions (Maslow, 1939). The satiation of the security or safety need becomes submerged, opening the door for new or higher needs such as academic achievement.

Gentilucci and Muto (2007) contended that leaders spent more time ensuring student security than facilitating the learning of students. Bradshaw, Waasdorp, Debnam, and Johnson (2014) stated how school climate was quite important to student academic success. Research has linked the climate of the school with positive student outcomes. Bradshaw et al. further contended that there was a need for leaders who can properly assess school climate for decision making purposes, while also understanding the interrelatedness of safety, engagement, and the learning environment.

Wilson (2014) held that a safe emotional and physical learning environment was essential for student growth and learning. Thien and Razak (2013) agreed that students

needed other students that they could trust. Safety can also be viewed as the level of trust or confidence that a student has in other students or friends. The two domains of friendship include process and provision. Friendship processes include the observed interactions which influences the friendship quality. Friendship provisions are the benefits that a friendship provides such as trust, security, and validation (Thien & Razak, 2013).

Astin (1993) listed safety in the learning environment as an environmental institutional characteristic related to student satisfaction, which reflected a belief that satisfaction was a measure of the likelihood of students continuing in the educational process. Learning environments inside and outside the classroom can hinder or encourage student development. Samimy, Kim, Lee, and Kasai (2011) explained how academic skills increased when students' experienced learning in a safe environment. Students obtained support from each other to create a safe house for learning to thrive. A safe learning environment can be defined as an intellectual and social space where students can homogeneous in learning communities with high levels of trust, protection, and shared understanding. Safe environments provide students with another avenue to continue the process of further constructing an evolving self-identity, without penalties from the leaders (Samimy et al., 2011). "Colleges can shape environments in ways that support learning by encouraging students to become involved in learning experiences that are educationally purposeful" (Ackerman & Schibrowsky, 2008, p. 310).

**Student-to-student relationship.** Ackerman and Schibrowsky (2008) held that connections with an institution may be the grounds for student-to-student relationships.

Lynch, Lerner, and Leventhal (2013) stated that students often select relationships with other students that have demonstrated similar or higher levels, engagement, and academic achievement. Common student-to-student relationships often developed into peer groups. Lynch et al. agreed that after peer groups form individuals became similar over time, yet attitudes and behavior helped determine student interactions and relationships which relate to student outcomes. The student-to-student relationship was a measure of the student's behavior in relation to engagement and academic achievement (Lynch et al., 2013).

Kiyama, Luca, Raucci, and Crump-Owens (2014) contended that recent research argued that African-American students connected differently than whites, suggesting diversity and inclusion as transitional success factors. Inclusion took place when positive interactions among students abounded. A sense of belonging may have expressed the degree to which students felt connected. Relationships helped assess the students' role in the group and could affect academic achievement (Kiyama et al., 2014). Student-to-student relationships can be viewed as an integral part of the learning community at HBCUs. Bista (2013) mentioned the importance of establishing relationship at HBCUs to help student socialize and succeed. Duncan and Barber-Freeman (2008) explained that student-to-student relationships can come together in the learning community to create greater meaning. Student interactions and activity can also help further graduate programs (Duncan & Barber-Freeman, 2008). Student achievement and program growth may be limited to the student's degree of relatedness found in the development of student-to-student relationships. Beachboard, Beachboard, Li, and Adkison (2011)

defined the relatedness of relationships as the feelings of belonging and connectedness that students experience with each other. Relatedness was not only the quality of the relationship among students, but included the quality of student relationships with faculty (Beachboard et al., 2011).

The relationship between students and faculty members has been extensively researched (Crosnoe, Monica, & Elder, 2004). Price (2015) held that social interactions between leaders and teachers were related to the teacher perceptions of student engagement. Price also contended that leaders influenced students through teachers. Bongartz et al. (2011) contended that student faculty relationship developed via coursework, the organization, and through projects. Social and professional relationships with faculty members have dual purposes but must remain professional (Bongartz et al., 2011).

Reio, Marcus, and Sanders-Reio, (2009) contended that Hirschi's (1969) sociological theory focused on relationships as attachments. Weak relationship attachments increased the possibility of inappropriate social behavior. Relationships with teachers can lead to strong feelings of attachment and can contribute to the completion of school. Attachment enabled engagement along with higher mental function (Reio et al., 2009). Meaningful learning and development occurs in an individual's zone of proximal development in the context of a relationship (Reio et al., 2009).

Lechuga (2011) described the graduate student's relationship with faculty as an important factor of the educational experience, while also fostering student success. Graduate students experienced high levels of contact with faculty members. The

relationships developed as students were provided with increased employment opportunities, professional development, growth and academic success (Barrick, Clark, & Blaschek, 2006). Relationships with faculty members were important as graduate students began to be socialized into the respective disciplines (Lechuga, 2011).

Social integration theories have helped to understand the rules and roles of student faculty relationships (O'Meara, Knudsen, & Jones, 2013). O'Meara et al. contended that research has revealed that student faculty relationships effect graduate students' satisfaction and experience. Graduate students most likely agreed that the student-faculty relationship was more critical than other success factors (O'Meara et al., 2013). Al-Hussami, Saleh, Hayajneh, Abdalkader, and Mahadeen (2011) stated that institutions with faculty of color and working relationships reported positive climates that fostered a great sense of belonging. Institutions for students of color may gain by supporting building of faculty-student relationships.

O'Meara et al. (2013) also explained that leaders must have the social competency to arouse and inspire students towards a shared vision of the organization. Leaders can encourage the teaching staff to direct and inspire teams to aggressively tackle any project. Leaders that gain skills at high school levels can translate those skills to higher education by revising previous narratives about student relationships, which can better meet the needs of diverse groups (O'Meara et al., 2013). Mara and Mara (2011) agreed that leaders must help faculty with more than pedagogy so that "interaction involves the formal institutional goals of fostering leadership and improving academic performance" (p. 76).

**Self-efficacy.** Persistence literature argued that academic success hinges on the students' self-efficacy, ability to adjust, and academic integrate in the university (Reid, 2013). The student's level of perceived self-efficacy may provide a partial explanation for student achievement. Reid contended,

Bandura (1997) maintained that a person's belief about one's expectations and capabilities influences future-oriented behaviors with that domain, and in turn produces outcomes that self-fulfills beliefs. Bandura called this self-fulfilling human agency *self-efficacy*, which is the belief about one's capability to organize and execute course of action that produce desired performances. (p. 77)

Reid further contended that beliefs in self-efficacy have been linked to performance expectations and academic achievement as students with higher levels of self-efficacy have leaned towards taking quite challenging courses. Self-efficacy has been attributed to better student problem solving, persistence in obtaining solutions, and better time management skills. Self-efficacy beliefs can come from sources such as academic success, role models, and situations that affirm the student's ability, yet any of the same sources can lower or raise the self-efficacy beliefs of any student (Reid, 2013).

Self-efficacy as a social cognitive belief influences the academic achievement of African-American students (Defreitas, 2012). Defreitas agreed that future results expected from behaviors influences achievement through self-efficacy, which was a strong predictor of academic achievement. Self-efficacy influences academic development to include activity choices, goal development, and persistence. Self-efficacy also directly and indirectly influences academic achievement. A direct

relationship of better grades for college students has been linked to higher self-efficacy. Defreitas stated, “Academic self-efficacy and college GPA are related even when controlling for socioeconomic status . . . the relationship between self-efficacy and academic performance has been well established” (p. 110). Rigg, Day, and Adler (2013) held that many authors have studied and discovered a positive relationship between engagement and self-efficacy. For college students, motivation impacted outcomes and higher correlations were found between engagement and self-efficacy. “As students develop confidence in their beliefs about their abilities, . . . their levels of engagement in their studies may increase” (Rigg et al., 2013, p. 139).

High schools and university leaders must work together with professional teachers to help build trust, increase student self-efficacy, and reduce inequalities. Kosar (2015) agreed that trust between the teachers and leader was directly related to professionalism. Leaders should encourage professionalism, provide confidence, and lead via ethical principles and practices. Leaders can use mistakes as learning opportunities to communicate and build sincerity and trust (Kosar, 2015). Kosar further stated that in a learning environment, leaders that trust are “more focused on school development and student learning” (p. 256). A leadership focused on student self-efficacy may initiate a level of continual student learning that reduces student inequalities.

Palmer, Davis, Moore, and Hilton (2010) held that inequalities in college access and degree achievement needs to be reduced to make sure the United States has a sufficient number of college graduates to help sustain America’s viability in the market place. College graduates are required for U.S. participation in today’s knowledge-based



society. Leadership must use a sense of urgency to compare the emphasis the rest of the world has placed on the need for higher education (Palmer et al., 2010).

**Motivation.** Young, Johnson, Hawthorne, and Pugh (2011) stated that the self-determination theory gave a multidimensional view of motivation. Humans tended to be concerned with being proactive, competent, and focused towards growth. Motivation was determined to be an internal or external choice or behavior. Self-determined behavior was typically caused by an internal locus of control, while controlled behavior derived from an external locus of control. The three categories of motivation include amotivation, external, and internal motivation. Uqdah, Tyler, and DeLoach (2009) described intrinsic motivation as activity engagement based on the activities inherent to satisfaction. Extrinsic motivation referred to activity engagement as a means to an end. Amotivation were pessimistic individuals with a locus of control outside one's self, resulting in questions as to why a student had decided to engage (Uqdah et al., 2009).

Young et al. (2011) agreed that motivation derives from goals related to a person's basic needs. Motivation can be maximized when situations promote basic needs. In the world of education, other people influence students' academic performance. The enhancement of motivation is situational driven—low extrinsic motivation increased with control—while high extrinsic and intrinsic motivation increased with autonomy. Met needs of autonomy, relatedness, and autonomy helped students perform better academically (Young et al., 2011).

Reeder and Schmitt (2013) found that students at HBCUs possessed a higher level of academic self-concept and intrinsic motivation. Students that sought high levels of

continuous learning were typically intrinsically motivated. Uqdah et al. (2009) agreed that motivation was an important factor critical to the success of black graduate students. The importance of motivation has increased at HBCUs because students have faced and overcome many obstacles in order to succeed (Reeder & Schmitt, 2013).

Sase, Abdelaal, and Amhimmid (2015) agreed that motivation helped determine the success or failure of students. Motivation affected the rate of learning and provided invigoration for motivated students to learn concepts faster. The lack of motivation causes students to be less attentive, less likely to misbehave, and prone to discipline problems (Sase et al., 2015). Leaders must use skills that encourage teachers to motivate students resulting in students that pay full attention to the lesson and participate actively in the learning activities (Sase et al., 2015).

Economos (2014) contended that for many years student engagement has served as an important contributor to academic achievement. Rigg, Day, and Adler (2013) traced the concept of engagement to Kahn (1990) who defined engagement in terms of physical, cognitive, and emotional involvement. Newswander and Borrego (2009) stated that engagement takes place when students and others invest time in mutually supporting the learning process. The first priority of engagement is to select diverse persons that are already engaged in increasing formal and informal participation, higher levels of attachment, and higher levels of satisfaction as indicated by retention rates. Faculty and students must actively participate in multi-layered interactions in order to create strong learning communities. Organizationally, students must be released from worry in order to focus on learning (Newswander & Borrego, 2009).

The experience of graduate students in the United States has global implications (Duranczyk, Franko, Osifuye, Barton, & Higbee, 2015). Rigg et al. (2013) contended that graduate student engagement was an important part of higher education as students that were less exhausted were more engaged. Graduate students with higher self-efficacy had higher levels of engagement. A lower level of exhaustion was experienced by more engaged graduate students. Social support provided graduate students with the ability to cope with demands and stress. A greater level of social support was correlated with lower levels of exhaustion. Graduate students that received support were found to be more engaged as well (Rigg et al., 2013). The research adhered to the suggestions of Handelsman, Briggs, Sullivan, and Towler (2005) who agreed that engagement was measured at the micro level to provide leaders with information about what takes place in and around the classroom.

**Faculty Mentoring.** Mentoring was derived from educational practices and Greek mythology (Davidson & Foster-Johnson, 2001); faculty mentoring is an important factor of students' engagement. The need for mentoring has been especially important when considering that as qualified leaders exit the profession and retire, "Teachers show little interest in assuming leadership roles" (Sciarappa & Mason, 2014, p. 51). Sciarappa and Mason stated that nearly 20% of leaders age 60 or older have retired. Individuals in the field of leadership and student achievement agree that the leader determines school quality. Good leaders lead good organizations which often produce high performing students (Sciarappa & Mason, 2014).

According to Davidson and Foster-Johnson (2001), mentoring is a formal or informal dynamic process of interaction and activity related to skill acquisition or work. Mentoring focuses on knowledge attainment, support, assistance and helps the mentee with goal achievement. The broad components of mentoring include a role model who provides psychological and emotional support along with career and/or professional development. Relationships from mentoring should provide benefits to both parties. Mentoring relationships must evolve from direct interaction between faculty and student. Formal mentoring relationships often include contractual agreement but such mentoring relationships come from developmental needs or mutual interests (Davidson & Foster-Johnson, 2001).

Davidson and Foster-Johnson (2001) held that mentoring in the arena of education has been linked to positive outcomes. Curry et al. (2015) explained that mentoring in graduate school was viewed as a collaboration that completed projects, presentations, and assignments. Davidson and Foster-Johnson (2001) agreed that mentored students had greater engagement, higher levels of satisfaction, and were more productive. Research results have found that positive outcomes were produced when student of color in higher education were involved in a mentoring relationship (Davidson & Foster-Johnson, 2001). According to O'Shea (2014), mentoring relationships that formed bonds often influenced and increased student engagement. A quality mentoring agreement can help to increase student resilience. Health attachments derived from mentoring relationships helped influence student engagement. One of the most

significant determinants of student engagement was the students' proper perception of the leader's behavior, which lead to engagement behaviors (O'Shea, 2014).

**Student Integration.** According to Wolf-Wendel, Ward, and Kinzie (2009), integration explained the extent whereby students began to share the beliefs and attitudes of faculty members and peers, which also included the extent that students adhered to institutional requirements and structural rules. Student integration takes place along a continuum as students separate or disconnect from the past, transition and begin interactions with new persons, and adopt and incorporate expectations and norms of the new group. The student's need to integrate into the higher educational social system includes a personal affiliation and intellectual connection. Wolf-Wendel et al. stated,

Tinto (1993) defined integration with regards to social and academic connection to the campus . . . Social integration refers to students' perceptions of interactions . . . Academic integration refers to perceptions of the experiences in the formal and informal academic system resulting from interactions. (p. 414)

Wolf-Wendel et al. (2009) further contended that research literature has used five constructs to measure integration: faculty interaction, peer interactions, faculty developmental concerns, intellectual/academic development, institutional and goal commitment. Involvement, as indicated by Astin's (1984) theory, posited that engagement reflects the students' investment of energy in activities with the amount of learning being proportionate to the quantity and quality of the learning experience. Astin believed that involvement and engagement has no essential differences. Yet, experts

believed that integration was distinct and separate from engagement (Wolf-Wendel et al., 2009).

Flynn (2014) contended that individual characteristics, commitments, and experiences provided students with integration into social and academic systems. Engagement literature does, however, struggle with the terms involvement, and engagement which were observable behaviors. Integration is a valued interaction that takes place when a student perceives that he/she is a valued member of the organization. Integration can also be viewed as the student's state of being based on personal fit with the campus and perceptions of interactions (Flynn, 2014).

Holland (2012) contended that integration in schools requires leaders to focus and understand the factors that contribute to and the factors that affect a student's sense of belonging. Leaders are called to ensure that students are supported while also feeling valued in the school community. The social integration helps to focus "on the individual level processes that create social bonds within groups and help individuals form a cohesive social structure" (Holland, 2012, p. 103). Approachable leaders serve an important role in establishing the social structure of any organization. Holland mentioned that persons in the community must be approachable and attractive to others. Schmidt and Venet (2012) contended that leaders who agree on some level with staff members obtain insights into ways to integrate leadership beliefs and approaches that help integrate all students.

**Study Habits.** According to Cormack et al. (2014), students face challenges concerning the difficulty of work, the amount of studying expected, and the ability to

cope with academic demands. Many students in higher education have very little knowledge on effective independent studying and, therefore, often lack the study skills required to engage. University-level studying is challenging, yet leadership can help find ways to assist students in developing higher order critical thinking (Cormack et al., 2014). Effective study habits may require critical thinking. Amin (2011) held that study habits are a pervasive problem.

Amin (2011) contended that study habits determined academic achievement. Students can have great academic careers on the college level but because of low study habits, students do not perform well on the graduate level. Study habits are mainly related to the area of study and are viewed as the way or style of study. The students' habits are the ways of practicing and exercising personal learning abilities. Study habits can also be viewed as a learner's behavioral pattern (Amin, 2011).

According to Amin (2011), personality was a student's unique entity of self. The action of personality termed character and behavior manifested character expressed through habits as the indicator of the person. Study habits are mainly related to behavior style and way of studying. When considering the learning process, Amin found,

Study habits reveal students' personality in action to their studies. Generally a learner's learning character is characterized by his study habit. Study habits serve as the vehicle of learning. As skills of learning they are means towards the ends of learning; on the other hand, formation of study habit goes through the process of learning itself. The genesis of study habits may be found in a learner's attitude

towards studies. A positive attitude and strong motivation for studies are reflected for the development of effective study habit. (p. 56)

Strom, Strom, and Beckert (2008) mentioned that academic habits and study time directly influence performance. Amin (2011) contended that study habits characterize the students learning character and reveal the students personality, while achievement applies progress and academic status. Achievement was defined as skill or knowledge derived as the result of adjusting to complex patterns which determined the students' pattern of energy utilized. Achievement or scholarly attainment was tested to measure knowledge, skills, or understanding. Self-concept, attitude, and study habits correlated to cultural settings and socioeconomic status. Study habits were concluded to be a key factor of student failure and success (Amin, 2011).

**Use of Technology.** According to House (2012), several computer and instructional design methods have helped to improve student achievements. Research findings have indicated that when student inquire motivation increases. Students engaged via the computer experience improved academic achievement outcomes (House, 2012). Lovin and Lambeth (2014) revealed that the pass rate in a traditional classroom increased from 69% to 82% when technology was used in the classroom.

Interactive whiteboard (IWB) technology was the type of technology analyzed in this study. Gillen, Littleton, and Twiner (2010) postulated that IWB's were mainly a system with touch screen specifically designed for interaction in the classroom. IWBs can be used by faculty to create and implement rich multi-mode resources (Gillen et al., 2010). Gillen et al. stated the following about the functions of IWBs:



1. A large, touch-sensitive, full-color display on which teacher and pupils can write their own text, call up text and images from their hard disk, Internet or intranet, and run a range of specifically designed curriculum-related software, including diagrams, simulations, partially completed 'quizzes' and so forth.
2. The option to select, display, move, manipulate and annotate images (including video) and texts.
3. The possibility to save and recall current and previous screens or elements of screens, which may be revisited, reviewed and amended as and when required.
4. The option of connecting the IWB to a range of other ICT equipment, including laptops operated by children in the class, digital cameras, video-players and microscopes. (p. 132)

Yudt and Columbia (2011) took a firm stance about the effectiveness of IWBs. Based on the work of child development expert Piaget (1959), cognitive performance requires an environmental stimuli and maturation. IWBs can provide the environmental stimuli necessary for learning. Yudt and Columbia (2011) further assured that IWBs enable the display of anything that can be seen on a computer to include vivid presentations, videos, animation, and other digital enhancements. IWBs built in tools enable students to record instruction time, post to websites, and have access to other electronic features simply by touching the screen. "These built-in tools have the potential to actively engage students in the learning process" (Yudt & Columbia, 2011, p. 18).

Stroud, Drayton, Hobbs, and Falk (2015) affirmed that IWBs provided an opportunity to engage students in ways not available to traditional tools. The use of IWB

innovative technologies helped to engage students. IWBs can positively influence learning and teaching when multimedia is used to increase student motivation and engagement. High levels of student engagement were measured when student enjoyed the learning experience (Stroud et al., 2005).

Solvie (2007) posited that IWBs were proven as effective tools for engaging students. IWB technology helps to prepare lessons and navigate to specific sections during instruction. Student needs are fulfilled by simply touching the white board. IWBs not only gains and maintains a student's attention, they engage participants in the lesson. Engagement takes place through helping student make meaningful choices, social interaction, and collaboration with other students. IWBs can be used to support engagement in many other ways. Students can manipulate and highlight text while also interacting with webs sites, diagrams, and pictures. Solvie further posited that IWBs can provide the conditions for engagement, yet faculty members should be encouraged to use the technology to continually monitor engagement by observing students during the learning process. Faculty members can lead or students can self-direct towards engagement coupled with a desire to participate and make a contribution (Solvie, 2007). True engagement with technology is a means moving beyond, "using technology to replicate older models of classroom structure to . . . a desire to create and demonstrate through responses that emanate and flow from students as a result of their engagement" (Solvie, 2007, p. 753).

Leaders should understand the needs of faculty and staff members when utilizing technology in the classroom. Lovin and Lambeth (2014) contended that organizations

develop and implement technology in the classroom but teachers are often not prepared. Leaders are required to use internal and external elements to assist with technology in the classroom. Users of technology suffer from access, restrictions, resources, and time constraints. Yet, barriers can be overcome through the use of collaborative learning communities. Leaders can also help organizations move beyond obstacles by including students in the instructional process when using technology. The attitudes and beliefs of teachers are important for leaders to understand when incorporating technology. Faculty member may be motivated by providing training, experience, and access to software and hardware, which can result in success (Lovin & Lambeth, 2014).

**Maslow's Hierarchy of Needs.** According to Maslow (1954), there is a classification of needs revealing five categories: psychological, safety and security, love/belonging, esteem, and self-actualization. The hypothesis hinged on the appearance of these needs sequentially. Movement for each person up a phylogenetic scale was coupled with the person's human development from birth to adulthood. The fundamental psychological needs are shelter, warmth, and food. As such basic psychological needs are achieved then other needs in the categories emerge as dominant. Therefore, once psychological needs are met, the safety needs emerge (Maslow, 1954). Lester (2013) stated, "The lower needs were more powerful (prepotent) than the higher needs. The more these basic needs were satisfied, the better would be the psychological health of the individual" (p. 15). Maslow (1954) contended that the ascension scale of needs requires an understanding if people are to be motivated. There was also an agreement that a

person existing in the category of safety and security appears to be living almost entirely for the need of safety (Maslow, 1954).

**Tinto's Theory of Student Retention.** According to Tinto (1975), the dropout model seeks to explain retention in institutions of higher education. Tinto's theory of student retention was derived from the model of student dropout. The model of student dropout was a combination of a theory of suicide by Durkheim and the cost-benefit analysis of investment decisions concerning educational activities. A social system with insufficient values of moral integration and collective affiliation increased the likelihood of suicide. College social systems can treat students in a manner similar to suicide victims within society. Lack of integration in the college system fosters lower commitment and increases the possibility of students leaving college. Durkheim's theory described conditions where dropout occurs: "One can reasonably expect that social conditions affecting dropout from the social system of the college would resemble those resulting in suicide in the wider society" (Tinto, 1975, p. 91).

Tinto (1975) contended that the models for dropout were factors that lead to persistence. Retention must include individual student attributes, dispositions, and characteristics relevant to educational persistence. The longitudinal dropout process of interactions between the students, academics, and social systems takes place as the student experiences the systems, continually makes adjustments based on personal goals, and institutional commitments which influence retention (Tinto, 1975). According to Tinto's theory, students entered institutions with varying attributes (e.g., race, ability, sex), precollege experiences (e.g., grade point averages, social, and academic

attainments), family backgrounds (e.g., value climates, social status attributes, and expectation climates), and each had a direct and/or indirect impact on the students' performance. Individual attributes and background characteristics influenced the student's development of commitment and educational expectation. Institutional goals and commitments served as reflections and predictors of student disappointments, experiences, and satisfactions (Tinto, 1975).

Tinto (1975) further dealt with the subject of retention by stating, "Given individual characteristics, prior experiences, and commitments, the model argues that it is the individual's integration into the academic and social systems of the college that most directly relates to his continuance in that college" (p. 96). The student's prior levels of institutional goals and commitments combined with structural and normative integration into the social and academic systems that created new commitment levels. The higher level of integration into the institutional system obtained by the student, the greater the level of commitment to the institution and the greater the chance of finishing college (Tinto, 1975). Tinto wrote that an intersection between the student's commitment to the institution and commitment to completion determined the student's behavior and the student's decision to continue college. Low goals or institutional commitments influence the decision to drop out. Tinto also found the following:

Sufficiently high commitment to the goal of college completion, even with minimal levels of academic and/or social integration and therefore minimal institutional commitment, might not lead to dropout from the institution. In this case, the individual might decide to 'stick it out' until completion of the degree

program or until he is forced to leave because of insufficient levels of academic performance. (p. 96)

Some authors contended that retention in the higher education environment primarily focus on institutional support, personal characteristics, and environmental factors. Ackerman and Schibrowsky (2008) held that the researcher Astin focused on translating characteristics of the environment into student satisfaction. Tyler et al. (2011) agreed that Tinto's theory of student retention identified three phases of the student decision to remain in college. Tyler et al. defined the first phase as the separation phase where behavior changed and interactions with individuals from the past began to decline. Phase two or the second stage was a time of transition as student developed and acquired the knowledge and skills required to interact with new groups successfully. Students began incorporate new interaction patterns in the last and final stage.

Tyler et al. (2011) contended that students brought prior experience, family characteristics, cognitive skills, and levels of commitment to college. The amount of time a student interacts with others is crucial to the students' ability to integrate the systems and develop a sense of belonging and community which helps the student leave or remain at the institution. Some of the other psychological antecedents of retention included student teacher relationships, institutional organization, and student centered characteristics (Tyler et al., 2011).

**Tinto Student Integration Model.** Tinto has conducted research in the area of retention for many decades. Many research articles were found on Tinto's Student Integration Model. Tinto (1975) developed the student retention model as a longitudinal

explanatory model of the process of persistence. The model was based on the level or degree of fit between the student and the institution. The items of social and academic integration influence the student's decision to drop out of college. Students arrive at the institutional environment with traits from life before the college or university (e.g., race, achievement, aptitude, educational, family, along with financial contexts). Student personal characteristics help determine student behavior and the initial levels of commitment to the institution and to the goal of finishing college. Background characteristics also influence and help predict academic performance, interaction, and social integration. The greater the student's academic and social integration, the greater the commitment to completion and to the institution (Tinto, 1975), which may have a positive influence on retention and persistence.

Ackerman and Schibrowsky (2008) held that Tinto's Student Integration model centered on the student persistence based on the degree to which the student integrated into the academic and social community of the campus. Other important factors included the qualities which the students brought to the campus, yet retention hinged on the activities that took place after college admission. A theory that explains student integration can also help explain student persistence (Ackerman & Schibrowsky, 2008). Students that tend to be well integrated are more likely to continue (Stuart, Rios-Aguilar, & Deil-Amen, 2014). Burley, Butner, Causey-Bush and Lawson Bush (2007) listed isolation and incongruence as the foundations of integration. Student success is dependent upon student involvement in the academic and social environment of the university, along with previously constructed personal characteristics. These

characteristics can help the student fit in the organization and achieve a level of congruence (Burley, Butner, Causey-Bush, & Lawson Bush, 2007). Ackerman and Schibrowsky (2008) contended that differences between the students' intellectual orientation and the academic character of the organization affect attrition.

Ackerman and Schibrowsky (2008) further held that faculty member interactions can help influence the required match between equality between orientation and character. Tinto believed that student commitments strengthen when student interact with faculty members, which influences the students' possibility of persisting towards completion (Museus, Nichols, & Lambert, 2008, p. 107). Tinto also compared the educational organization with the solar system as subcultures revolve around the dominant established culture of the institution (Burley, Butner, Causey-Bush, & Lawson Bush, 2007). "The Student Integration Model makes a significant contribution to an understanding of retention by focusing on the central role of the institution and of its faculty in promoting retention, a consideration that is often overlooked" (Ackerman & Schibrowsky, 2008, p. 300).

**Hirschi's Social Control Theory.** Hirschi's Social Control Theory helps to address graduate student achievement characteristics such as student engagement, student relationships, motivation, mentoring and integration. Hirschi's (1969) development of the social bond theory argued that unacceptable behavior derives from the absence or weakens of social bond elements. A higher social order of bond and society includes the elements of attachment, commitment, involvement, and belief. Attachment to parents, teachers, and peers is a method of creating a social-moral link. Commitment is the



investment of energy to establish a reputation and relationship, yet persons rationally weigh the cost of losing the acquired. Involvement as a bond deters improper behavior as a person too involved in other activities and simply does not have the time. Belief as the moral bond element assumes that persons have a common value system. Hirschi stated that weak beliefs are unmotivated and lead to delinquent acts. "There is variation in the extent to which people believe they should obey the rules of society, and, furthermore, that the less a person believes he should obey the rules, the more likely he is to violate them" (Hirschi, 1969, p. 26). These four social bonds connect persons via social interactions to a higher social order and to social institutions. Persons that do not have such interactions do not have anything to constrain personal behaviors (Hirschi, 1969).

Boman, Krohn, Gibson, and Stogner (2012) commented that persons committed to goals, attached to others, involved in activities, and believe in organizational values may be constrained from such unacceptable behaviors. People form bonds that control behavior with prosocial values, prosocial institutions, and prosocial people. Chui, Chan, and Oliver (2012) held that the four main interrelated bonds include attachment, commitment, involvement, and belief. Boman et al. (2012) stated how attachment is an element of social bonds that focused on interpersonal relationships. Attachment is a person level of psychological affection to institutions or others, which in turn affects behavior. Chui et al. (2012) contended that the internalized prosocial norms lead to commitment and involvement. Commitment refers to behavior based on social relationships with others that people do not want to risk and, therefore, engage in appropriate activities. Involvement relates to the opportunity costs of how persons spend

time engaged in prosocial activities and not engaged in with antisocial behavior. Social bonds and involvement affect relationship quality (Boman, et al., 2012). Chan, Oliver, and Chui (2013) described beliefs as a person's degree of adherence to values of behavior associated with law or the respect for the morality of social norms. Hirschi (1969) made a connection or linkage between attitude and behavior as prosocial bonds that can control behavior. However, Hirschi's theory of social bonding also touched on informal social control where the bonds of controlled behavior are not so much formally adopted by laws, but are more socially motivated. The stronger the bonds of a person to the society, the less likely he/she is to participate in activities against the norms (Chui, Chan, & Oliver, 2012).

**Bandura's Theory of Self-Efficacy.** Bandura's (1977b) Theory of Self-Efficacy helps to address student success variables such as self-efficacy, engagement, motivation, and student study habits. Bandura used the theory of self-efficacy to look at the different results of differing modes concerning the treatment of anxiety. Self-efficacy was viewed as a common mechanism for dealing with behavioral responses. Psychological procedures often alter the strength and level of a person's belief in the execution of an activity. Bandura hypothesized that personal efficacy expectations determines if coping behavior would take place, the amount of effort, and how long the behavior would continue in the face of adverse experiences and obstacles. "Persistence in activities that are subjectively threatening but in fact relatively safe produces, through experiences of mastery, further enhancement of self-efficacy and corresponding reductions in defensive behavior" (Bandura, 1977b, p. 191).

According to Bandura (1977b), self-efficacy derived from sources of information include: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Greater dependability on experiences results in greater levels of self-efficacy. Personal mastery experience undergirds performance accomplishments which are a dependable source of information for efficacy. Mastery expectations begin to rise with successful actions and decrease when failure takes place. Performance successes begin to replace experience as the new vehicle for change (Bandura, 1977b).

Wambach, Brothen, and Dikel (2000) stated that Bandura's self-efficacy theory takes place when students receive positive feedback on learning which results in the student possessing a higher sense of personal abilities and mastery. Usher (2009) contended that Bandura (1977b) theorized that personal beliefs and abilities outcomes powerfully influences the way people behave. Self-efficacy beliefs help determine a person's choices, efforts, perseverance, persistence, and the degree of serenity experienced while engaged in tasks (Usher, 2009). Engagement may be possible if person believe the success of previous efforts. Phan (2013) stated that Bandura's theory of personal self-efficacy can help explain positive outlook, enriched learning experiences, and anticipatory thoughts. Student perceptions and positive experiences may help students experience proactive engagement (Phan, 2013).

Usher (2009) also contended that personal self-efficacy beliefs are important determinants of behavior and motivation. Wambach et al. (2000) counted personal belief as the motivation to overcome while also creating a feeling of empowerment. Intentional goals that seek a certain behavior are the same as the intent to change behavior. Highly

valued goals can enhance motivation in efforts to adopt a new healthy behavior (Wambach, Brothen, & Dikel, 2000). “Personal belief is paramount in personal change because it provides motivation and incentive to overcome barriers to change and evokes feelings of empowerment to enact change” (Dewar et al., 2013, p. 485).

Jenkins, Shaivone, Budd, Waltz, and Griffith (2006) conferred Bandura’s theory on self-efficacy as an individual belief about ability. Baran and Kilic (2015) defined study habits as a combination of motivation and working style. Motivation is partially rooted in cognition. Study habits make “a significant contribution to the prediction of achievement” (Baran & Kilic, 2015, p. 324).

**Bandura’s Social Cognitive Theory.** Bandura’s (1977a) Social Cognitive Theory (SCT), which was formerly known the Social Learning Theory, posited that behavior derives from choice actions based on cognitive information processing considering self, the environment, and likely consequences. SCT suggests that people shape and are shaped by actions and the environment, which are called the triadic reciprocity. Behavior is based on outcome and efficacy expectations. SCT triadic reciprocity uses personal factors of belief and attitude along with social and physical environmental factors together to influence behavior. The relationship between the person, the environment, and behavior was called reciprocal determinism. Reciprocity suggests that changes in personal factors influence change in environmental factors which influence behavior (Bandura, 1986). Bandura (1977a) found,

Outcome expectancy is defined as a person's estimate that a given behavior will lead to certain desired outcomes. An efficacy expectation is the conviction that

one can successfully execute the behavior required to produce the outcomes.

Outcome and efficacy expectations are differentiated, because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior. (p. 193)

Bandura (1977a) contended that the SCT included the constructs of self-efficacy, social support, self-control, and outcome expectations. SCT also has been used to describe the learning processes along with sub-processes required for motivation and goal directed behavior.

Bandura's (1977a) social cognitive theory also helped to address graduate student success variables such as self-efficacy, engagement, motivation, and student study habits. Dewar et al. (2013) mentioned the social cognitive theory as a framework for why people acquire healthy behaviors as products of interplay between environmental, personal, and behavioral factors. Reciprocal determinism defined the effect or relationship among factors. Self-efficacy as the center determinant of the social cognitive theory was defined as personal belief in the capacity to control behavior. Self-efficacy also directly and indirectly influenced behavior by setting expectations and goals (Dewar et al., 2013).

Morgan et al. (2014) held that engagement may be important if Bandura's social cognitive theory can be a framework for changing beliefs and personal cognitions to improve behaviors. Robertson and Felicilda-Reynaldo (2015) explained that Bandura believed that a person choose to engage based on expectations of success or failure. Self-efficacy as belief in personal ability is molded by experiences of achievement,

observation, motivation, and anxiety. Based on the theory of social cognition, the likelihood of a student fully engaging increases if the student possesses self-efficacy (Robertson & Felicilda-Reynaldo, 2015).

Ponton and Rhea (2006) contended that the social cognitive theory motivates persons to get involved in different activities because the process of cognition uses information obtained from observing others or from personal actions. “Forethought is the ability to use symbolization to create mentally unrealized future scenarios that provide motivation and desirable courses to pursue” (Ponton & Rhea, 2006, p. 39). Ponton and Rhea also contended that cognition influences behavior and plays an important role in motivation and therefore influences choice. Most persons are motivated to engage in behaviors that lead to desirable outcomes. “Self-efficacy mediates the influence of outcome expectancies on motivation as behaviors are not chosen unless the agent believes that requisite capability for success exists” (Ponton & Rhea, 2006, p. 41). Motivation can also be used to develop study habits.

**First Generation HBCU Students.** The impact of engagement for first generation HBCU students was also considered. Oliver (2008) agreed that first-year university students often experienced multiple difficulties as a consequence of the student’s background and learning experiences. First-year students often lack the skills and development needed to achieve academic success, but should be assisted with assuming responsibility for personal learning. Oliver contended that the learning environment should facilitate student engagement. Many first-year students are stressed by new learning processes that required high levels of personal responsibility. First-year

students require support that helps manage the learning environment while also providing choices to engage in suitable learning opportunities based on student wishes and needs (Oliver, 2008).

HBCUs have contributed vitally to the enhancement of educational opportunities for underrepresented students, while also serving instrumentally to help African-American students contribute to the intellectual, economic, and cultural landscape of the United States (Toldson, 2013). Longmire-Avital and Miller-Dyce (2015) agreed that a lot of literature is available on the backgrounds, socioculture, and experience of first-generation students. Research has been conducted at predominantly white institutions often comparing first-generation students to non-first-generation students which may not apply to the lives of first-generation African-American students at HBCUs. First-generation students derive from families with no postsecondary educational experience. Parents without undergraduate experience typically support students that lack college efficacy and capital. Barriers such as cognitive development, parental income, and academic motivation typically accompany the postsecondary choice of such less selective students (Longmire-Avital & Miller-Dyce, 2015).

Longmire-Avital and Miller-Dyce (2015) contended that first-generation African-American students select higher education based on the available types of financial aid. First-generation student socioeconomic backgrounds and lack of preparedness can create a struggle integrating socially and academically resulting in factors that may link to early departure. The findings of Longmire-Avital and Miller-Dyce suggested that the personal evaluation of academic performance for first-generation African-American college

students at HBCUs may be linked to personal perception of social status within the community, while non-first-generation students evaluated social status based on social ability and appearance. Socioeconomic and first-generational statuses were factors independent of minority status at HBCUs (Longmire-Avital & Miller-Dyce, 2015). The parents, family, and friends of first generation college students may not possess the skill or knowledge to help first generation students engage at HBCUs. Leaders, faculty, and staff are required to put forth great efforts to ensure and increase the engagement of first-generation African-American students at HBCUs.

Pike and Kuh (2005) agreed that first-generation students tend to have lower levels of engagement. First-generation college students often work and are less likely to develop relationships with students and faculty members or to get involved in campus activities. First-generation college students are less likely to integrate as the environment is perceived as less supportive. Yet, students that lived on campus and developed relationships were more engaged overall (Pike & Kuh, 2005). Pike and Kuh further contended that the campus environment resulted in greater engagement, positive learning outcomes, and intellectual development. First-generation African-American students at HBCUs must be informed about mentoring and how engagement on the campus environment can impact academic performance. Lightweis (2014) agreed that mentoring directly affected retention and persistence. The mentoring programs for first-generation students should be based on the competencies required to be successful in the college environment to include relationship building, career, and academic support. Relationships via mentoring can meet the student's social and academic needs which help



create successful learning experiences (Lightweis, 2014). Pike and Kuh (2005) stated the following:

Gains in student learning were directly related to integration of diverse experiences and perceptions of the college environment. Academic and social engagement was indirectly related to gains in learning through their effects on integration. That is, the effects of engagement were mediated by integration, or the extent to which students were able to incorporate information from their courses and other learning activities in their conversations with peers and others. (p. 290)

**Role of Parents.** The role of parental involvement in the lives of college students remains important and may be a factor related to the level of student engagement. Agliata and Renk (2008) held that parents are quite influential as college students' process towards greater levels of independent living. Adults seeking a separate and new identity often view parents as authority figures that set behavioral rules and regulations. The impact of parental socialization relates to how college students cope with pressure, determine value, and make lifestyle preferences. Each decision is related to the student's academic and social success. More importantly, Agliata and Renk agreed that the parenting beyond high school is important to college students.

Shim, Barber, Card, Xiao, and Serido (2010) further added to the role of parents in the financial socialization of college students. Parents of some successful students teach financial management activities which include tracking expenses, budgeting, paying full credit card balances, budget spending, saving money, and investing. Students

that receive and observe positive financial lessons have a better chance of gaining knowledge and confidence in making financial decision in college (Shim et al., 2010).

Wartman and Savage (2008) agreed that parents can serve as partners reinforcing organizational messages of financial management, retention, and graduation. Parents that partner with the Student Affairs can result in positive student outcomes. The role of involved parents includes,

Showing interest in the lives of their students in college, gaining more information about college, knowing when and how to appropriately provide encouragement and guidance to their student connecting with the institution, and potentially retaining that institutional connection beyond the college years.

(Wartman & Savage, 2008, p. 5).

### **Summary**

Higher levels of student engagement at a historically black college and university (HBCU) will lead to student satisfaction and desirable outcomes (Chen, Ingram, & Davis, 2014). This chapter provided information on investigating the relationship between graduate student engagement and academic achievement at a HBCU located in the Southern region of the United States. The population of the HBCU included African-American graduate students from the Schools of Arts and Science, Education, Business, and Social Work. The dependent variable of academic achievement was discussed in detail. Reviews of the independent variables also took place to include (a) safety in the learning environment, (b) student-to-student relationships, (c) student to faculty relationships, (d) self-efficacy, (e) student motivation, (f) student faculty mentoring, (g)

student integration, (h) student study habits, and (i) graduate student achievement. A review of the theories that helped develop a new conceptual revised student engagement model included Tinto's Theory of Student Retention and Integration model, Hirschi's Social Control Theory, Bandura's Theory of Self-Efficacy, and Bandura's Social Cognitive Theory. The Chapter III discusses the theoretical framework including the research design, theory, definitions, and relationship among the variables. Finally, the chapter will conclude with a discussion of the limitations of the study.

## CHAPTER III

### THEORETICAL FRAMEWORK

#### **Introduction**

This chapter expands on literature that focuses on the nature of the study. The research presented was designed to investigate the relationship between factors of graduate student engagement and academic achievement at a HBCU in the Southeastern region of the United States. The research investigated the relationship to graduate student engagement of variables which include (a) safety in the learning environment, (b) student-to-student relationships, (c) student-to-faculty relationships, (d) self-efficacy, (e) motivation, (f) faculty mentoring, (g) student integration, (h) study habits, (i) demographic factors, and (j) technology. The factors were identified in order to investigate the relationship between student engagement and academic achievement. The purpose of the study was to examine the relationship between factors of graduate student engagement and academic achievement. Chapter III also includes the research design, definition and relationship among variables, limitations of the study, and a summary.

Engagement's ability to create a supportive environment, develop a sense of community, and increase academic success requires an investigation of the factors that relate to academic achievement (Palmer, Davis, & Maramba, 2010). This research uses a theoretical framework of theories to investigate the relationship of the factors of engagement and academic achievement including (a) Tinto's Theory of Student

Retention, (b) Tinto's Student Integration Model, (c) Hirschi's Social Control Theory, (d) Bandura's Theory of Self-Efficacy, (e) Bandura's Social Cognitive Theory. A portion of each theory was used to explain how academic achievement the dependent variable interfaces with the nine independent variables. The theories combine to create a framework for understanding the context of the study.

### **Tinto's Theory of Student Retention**

Vincent Tinto (1975) created a model of student dropout to address the interplay between the institutions environment and the student. Tinto's model has been used as the foundational literature in higher education for retention research. Tinto's theory of student departure contended that the student's decision to depart or remain at an institution derives from many interchanges between the student's and the people in the institution. Student integration into the social and academic domains is the most important piece of student retention. The degree to which the student integrates can be used to predict student departure or persistence towards graduation (Tinto, 1975).

According to Tinto (1975), the theoretical model of dropout is diagrammed in Figure 1. Dropout from college is a longitudinal process with interactions between the student and the social and academic systems in institution where the person experiences the systems and continually modifies personal goals and institutional commitments in a way that leads to persistence and/or differing forms of dropout (Tinto, 1975).

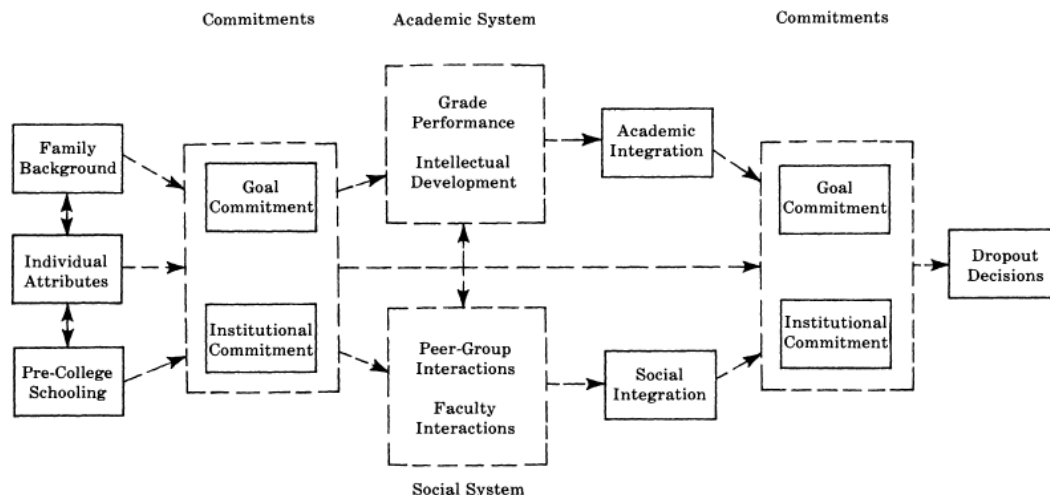


Figure 1. Tinto's (1977) model of student dropouts.

Tinto's model of dropout was defined further in 1993 to include student background characteristics before college, experiences in college, and the effect of external forces. According to Tinto (1993), these elements were the cause for why students departed. The level of student's initial goal and commitment at the start and end of college were also considered along with the student's level of persistence.

Tinto (1993) held that students' decisions to persist were also affected by the constructs of adjustment, incongruence, difficulty, and isolation within the context of the environment. Adjustments are needed for students to transition into the new environment. The student must separate from the old world and live on his/her own. Difficulty is the students' inability to achieve academic standards, which may derive from the student's lack of preparedness, adequate academic skills, and differing grading policies. Tinto viewed incongruence as a lack of fit between the student and institution's needs, preferences, and interests. Isolation is the lack of the student establishing a

personal bond with the social community. External forces such as obligations also influence student departure decisions (Tinto, 1993).

Tinto (1994) held that stronger levels of persistence would more likely persist toward degree completion. Pantages and Creedon (1978) contended that Tinto stressed the need for a framework to understand attrition in contrast to simply identifying its correlates. Tinto's model of dropout used a path analysis with the relationship of variables diagrammed on linking paths (Pantages & Creedon, 1978).

Tinto (1993) concluded that student characteristics and experiences point to causes depicted in the model that affect student success. The Theory of Student Retention also aligned with the independent variables of (a) Safety in the Learning Environment, (b) Student-to-student Relationships, (c) Student-to-Faculty Relationships, (d) Self-Efficacy, (e) Motivation, (f) faculty mentoring, and (g) Integration. An important connection was made between the Theory of Student Retention and academic achievement because the theory help identify the factors related to achievement.

### **Tinto's Student Integration Model**

Tinto's Student Integration Model was initialized in 1975 and stressed academic and social integration as primary factors influencing attrition. Tinto's model posited that the lack of integration was one of the reasons that students withdraw from institutions. Stuart, Rios-Aguilar, and Deil-Amen (2014) contended that strategies to improve institutional completion rate centered on student engagement. Tinto's (1975) theory on student persistence agreed that increased student engagement helped to enhance success and persistence. Tinto argued that students who integrate socially and academically

succeed and persist. Figure 1 also depicts Tinto's Student Integration Model. Tinto (2007) agreed that the patterns of interaction and the concept of integration are central to the model of student integration.

The integration model was useful for investigating such variables as safety in the learning environment, student-to-student relationships, student-to-faculty relationships, student faculty mentoring, and student integration. Tinto (2007) explained how social and academic integration influences different students in different ways, yet students are more likely to persist when both forms of integration take place. Ackerman and Schibrowsky (2008) held that student engagement in campus life, academic work, and other activities provide the foundation for relationships with other students, faculty members, and mentors. Retention depends on the interactions after admission.

Ackerman and Schibrowsky agreed that a match between student characteristics was influenced by the relationships with faculty because interactions result in strengthened student commitments which help increase the possibility of retention. The *Student Integration Model* makes a significant contribution to an understanding of retention by focusing on the central role of the institution and of its faculty in promoting retention, a consideration that is often overlooked (Ackerman & Schibrowsky, 2008).

Tinto (2007) contended that the degree of integration into the college system leads to greater commitment and achievements. Characteristics and experiences point to causes depicted in the model that affect student achievement. The Student Integration Model also aligned with the independent variables of (a) Safety in the Learning Environment, (b) Student-to-Student Relationships, (c) Student-to-Faculty Relationships,



(d) Self-Efficacy, (e) Motivation, (f) Mentoring, and (g) Integration. An important connection was made between the student Integration Model and academic achievement because the model also identifies some factors that are related to academic achievement.

### Hirschi's Social Control Theory

According to Alston, Harley, and Lenhoff (1995), Hirschi (1969) developed the Social Control Theory (SCT) as a theoretical approach to view the sociology of addiction. The SCT centers on sociological factors that help “prevent persons from participating in deviant behavior . . . beliefs, values, and/or behaviors which are inconsistent with acceptable social norms and presents harmful consequences for the individual and/or the public” (Alston, et al., 1995, p. 31). Alston et al. contended that Hirschi's (1969) SCT holds to an assumption that people are controlled by the bonds of society; therefore, weakened social bonds enable persons to engage in delinquent behavior. Social bonds consist of attachment, commitment, involvement, and belief. Attachment is a person's symbiotic attachment to society. Hirschi's SCT can be viewed in Figure 2.

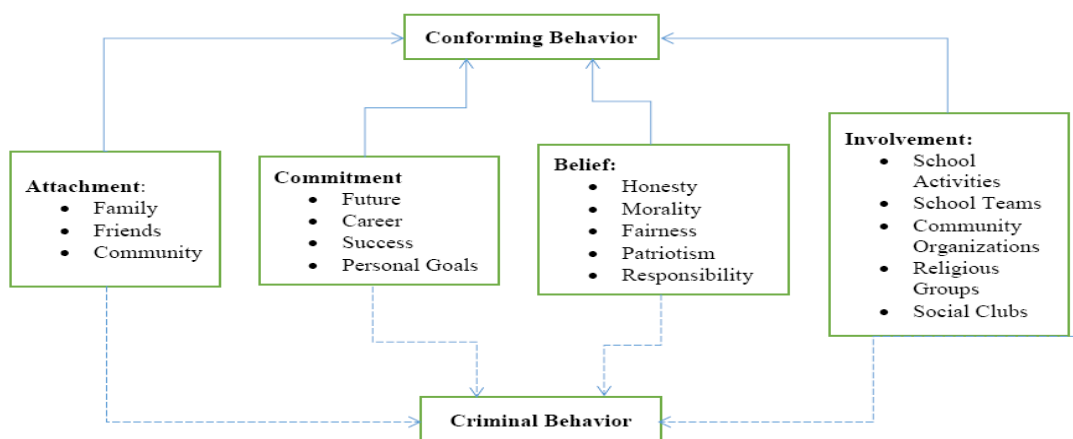


Figure 2. Hirschi's (1969) Social Control Theory.

Hirschi (1969) held that persons with strong attachments are less likely to be in violation of societal norms. Alston et al. (1995) defined commitment as a person's investment in institutions and social activities. An association resides between defiance and commitment; therefore, a person that invests energy, time, and resources in order to conform to social expectations and norms is less likely to experience deviation than a person who has not made such an investment. Hirschi (1969) contended that persons with health commitment investments will suffer a greater loss than person not vested or moderately invested, placing defiant behavior as less appealing. Hirschi listed involvement as another element of social bonding, postulating how structure time in large amounts of socially acceptable activities reduces the available time to be involved in deviance. Hirschi discussed a person's individual level of belief concerning the moral value of social shared norms and values. Persons who believe strongly in such social norms are less likely to deviate from social expectations (Alston et al., 1995).

Hirschi's (1969) SCT was used to examine the independent factors of engagement, self-efficacy, student motivation, and student study habits. Sansone and Thoman (2006) explained how motivation direction typically can be reflected base on goals which reflect what and why a person engages in an activity. Motivation can vary in intensity based on value and expected outcomes. Motivation is typically extrinsic when goals are defined in terms of reaching an outcome based on engagement (Sansone & Thoman, 2006). Nawaz and Gilani (2011) contended that a positive relationship exist between attachment bonds and self-efficacy. Bandura (1977) held that increases in self-efficacy relate to student academic choices, career pursuits, and the success of such

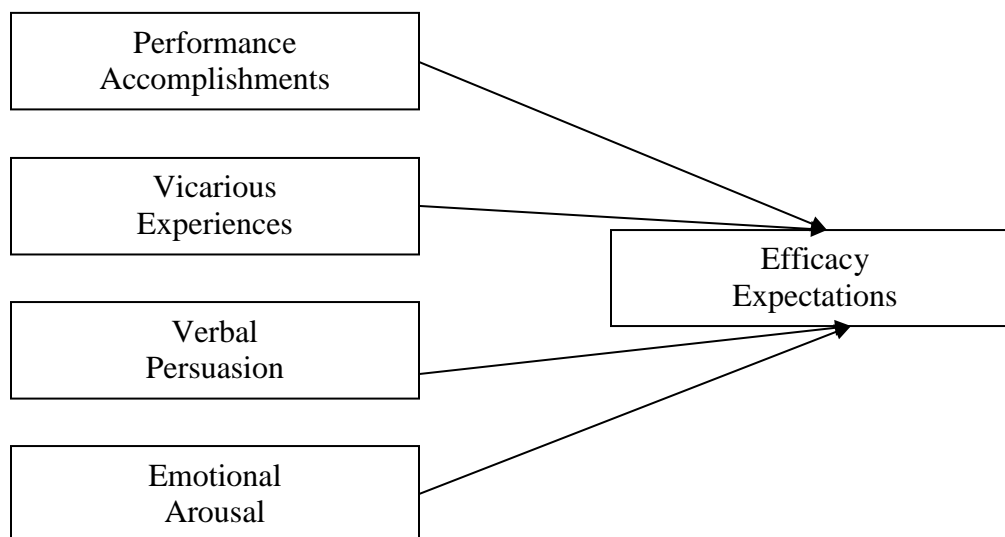
pursuits. Bandura (1986) stated that, “Those who judge themselves as inefficacious are more inclined to visualize failure scenarios and to dwell on how things will go wrong. Such inefficacious thinking weakens motivation and undermines performance” (p. 729). Study habits typically include a conditioned thinking process. Kelley (1996) contended that learning is a conditional thinking process that requires conscious behavior where each person develops a personal system of thought. Thinking habits take the form fixed preconceptions, attitudes, prejudices, and expectations (Kelley, 1996). Study habits can “Predictably organize external events and circumstances into specific perceptual patterns” (Kelley, 1996, p. 324).

Hirschi (2011) held that a few studies directly supported the relationship between achievement and satisfaction. O'Meara, Knudsen, and Jones (2013) contended that relationships in graduate school have a major effect on satisfaction, motivation, and achievement. “Theories of academic and social integration have helped illuminate how and why some students are integrated effectively” (O'Meara et al., 2013, p. 316). Hirschi's Social Control Theory only aligns with the following independent variables (a) Student-to-Student Relationships, (b) Student-to-Faculty Relationships, (c) Motivation, and (d) Integration. An important connection was made between the Social Control Theory and academic achievement. The SCT identified some factors that are related to academic achievement.

### **Bandura's (1977) Theory of Self-Efficacy**

Bandura's (1977) Self-Efficacy Theory is based on the assumption that using psychosocial procedures is a way to strength personal efficacy expectations. Such

expectations are a conviction about personal ability to successfully execute the behavior required to achieve the desired outcomes. Mastery expectations affect behavior initiation and persistence. Perceived self-efficacy can influence a person's activity choice and settings. A stronger level of perceived self-efficacy provides more active persistence. Bandura (1977) contended that self-efficacy expectations have four dimensions: magnitude (level of difficulty), general sense of efficacy, and strong or weak expectations respectively. Figure 3 lists the four sources of efficacy expectations.



*Figure 3.* Bandura's (1977) Theory of Self-Efficacy.

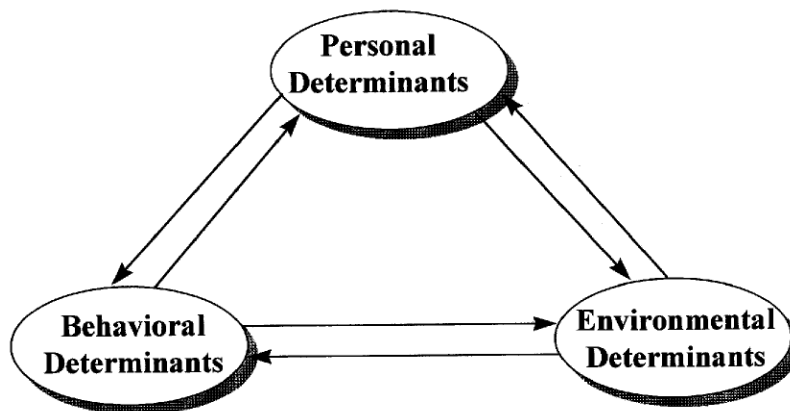
According to Bandura (1977), performance accomplishments are successes based on the experience of personal mastery which result in improved behavioral functioning often transferred to other activities. Some of the modes of induction include participant modeling, performance desensitization, performance exposure, and self-instructed performance. Bandura contended that vicarious experiences rely on inferences derived

from social comparisons. Vicarious experiences provide and generate efficacy expectations as persons see “others perform threatening activities without adverse consequences can generate expectations in observers that they too will improve if they intensify and persist in their efforts” (p. 197). Verbal persuasion leads a person to believe through suggestion that one can successfully cope with a previously overwhelming experience, yet is a weaker efficacy expectation due to the lack of an authentic experience. Bandura further held that verbal influence is mainly used to raise outcome expectations rather than to enhance self-efficacy. Emotional arousal is based on situations to provide informal value of competency. A personal state of arousal is used to judge stress and anxiety. Elevated levels of psychological arousal can lead to anxiety that exceed the fear of a threatening situation. Bandura concluded that modeling approaches teach effective coping skills, remove fears, and enhance self-efficacy.

Bandura’s (1977) Theory of Self-Efficacy was used to examine the dependent variables of engagement, self-efficacy, student motivation, and student study habits. Bandura stated that through a participant modeling approach incapacitated persons can “rapidly lose their fears, they are able to engage in activities they formerly inhibited, and they display generalized reductions of fears toward threats beyond the specifically treated conditions” (p. 197). A cognitive appraisal for arousal helps determine the level and direction of motivation towards action. Usual coping habits that fail create heightened arousal while waiting for new learning to reduce personal vulnerabilities (Bandura, 1977).

### **Bandura's (2001) Social Cognitive Theory**

According to Bandura (2001), psychosocial mechanisms use symbolic communication to influence a person's thought, action, and behavior. The Social Cognitive Theory (SCT) provides a conceptual framework to examine mechanisms and determinants for such effects. Behavior has been explained in a unidirectional fashion, where behavior has been shaped by internal or environmental influences. SCT explains psychosocial functions based on a triadic reciprocal causation (Bandura, 1986). This transactional view of society, self, and personal factors combines cognitive, biological events, affective, behavior patterns, and environmental factors influence each other while interacting and operating bidirectionally (see Figure 4). Figure 4 is a triangle with bidirectional interaction influencing personal determinants or factors including affective, cognitive, and biological events, behavior determinants, and environment determinants.



*Figure 4.* Triadic Reciprocal Causation Model (Bandura, 1977).

The Social Cognitive Theory (SCT) was founded on an agentic perspective (Bandura, 2001). Humans are not simply reactive beings, but are proactive, self-organizing, self-regulating and self-reflecting. The social systems have embedded

humans with adaptation, change, and self-development. These factors allow personal agency to operate within the network of sociostructural influences. Agentic transactions create persons that are products and producers in the social system. Social structure and personal agency combine as bi-determinants in the integrated causal structure not as a disembodied duality (Bandura, 2001). Bandura (1986) contended that the SCT helps to understand and explain human agency via the interdependence of the three determinants in a three-point union called the Triadic reciprocal causation.

Bandura (1977) also held that the triangle provides a transactional view of society and self, internal factors based on cognitive, biological, and affective determinants.

Bandura (2001) agreed that behavior and environmental determinants operate interactively to influence each other bi-directionally. The human ability to symbolize can be used as a tool for understanding, creating, and regulating the environment. The majority of external influences affect people cognitively rather than directly. Cognitive factors help people determine which events will be in focus, the meaning of events, the effect of events, the events motivating power, and how the information will be organized and used in the future. People use symbols to process and translate experience into cognitive models that guide judgment and action. Symbols are used by people to provide meaning, continuity, and form to experiences (Bandura, 2001).

Bandura (2001) also contended that understanding is gained from causal relationships as people expand personal knowledge using symbols to guide experiences based on information. People find solutions to problems, evaluate outcomes, and make choices without a behavioral search. Through symbols people communicate via any

distance. Bandura found that, “In keeping with the interactional perspective, social cognitive theory devotes much attention to the social origins of thought and the mechanisms through which social factors exert their influence on cognitive functioning” (p. 267).

Self-regulatory capability was used to help investigate how students are motivated and how student develop good study habits. According to Bandura (2001), people are performers and self-reactors with the ability to self-direct. Effective functioning substitutes self-regulation in place of external demands. “The self-regulation of motivation, affect, and action operates partly through internal standards and evaluative reactions to one’s own behavior (Bandura, 2001. p. 267). Bandura held that motivators for actions derive from anticipated satisfaction gained from fulfilling standards. Standards alone do not create motivational effects, yet effects come from reactions to a person’s performance and from the evaluation of self-investment activities. Self-regulation requires both discrepancy reduction and production. Actions are then motivated the proactive setting goals, mobilizing resources, efforts and skills. After goals are obtained, persons with a high sense of efficacy set new higher goals (Bandura, 2001).

Bandura (1977) defined self-efficacy beliefs as a person’s confidence when engaged in an activity that achieves a goal. Self-efficacy beliefs help predict whether a person will engage, persevere, and will achieve one’s goal (Bandura, 1977). Self-efficacy beliefs in the educational environment may impact performance, which refers to a student content knowledge and the tasks needed to achieve desired outcomes. Bandura’s Social Control Theory identifies, aligns, and makes important connections as



self-efficacy belief, outcome expectations, and self-regulated learning derives as the key personal determinant factors that impact human agency. The SCT identifies these independent variables as factors related to academic achievement.

### **Research Design**

The research design for this study was centered on the theoretical framework and the intent of the study. The case study approach was used to explore the relationship between the independent and dependent variables. A mixed method design provided an indication of the study types along with how the study was conducted. Creswell (2007) agreed that the case study can be used to explore a real life system or case through in-depth collections of data from multiple sources. Salkind (2012) contended that the mixed method provides both qualitative and quantitative methods for the research design. Most importantly, the mixed method is the “best way to look at a phenomenon of interest from a variety of perspectives and thereby be more informative” (p. 10).

### **Theory of Variables**

The researcher hypothesizes a relationship between the independent and dependent variables. The literature review revealed a relationship among the factors of engagement and academic achievement. The combination of independent variables impacts the dependent variable. Figure 5 shows the relationship of the independent and dependent variables. The independent variables are listed on the left of the Figure 5 and the dependent listed to the right depicting the relationship.

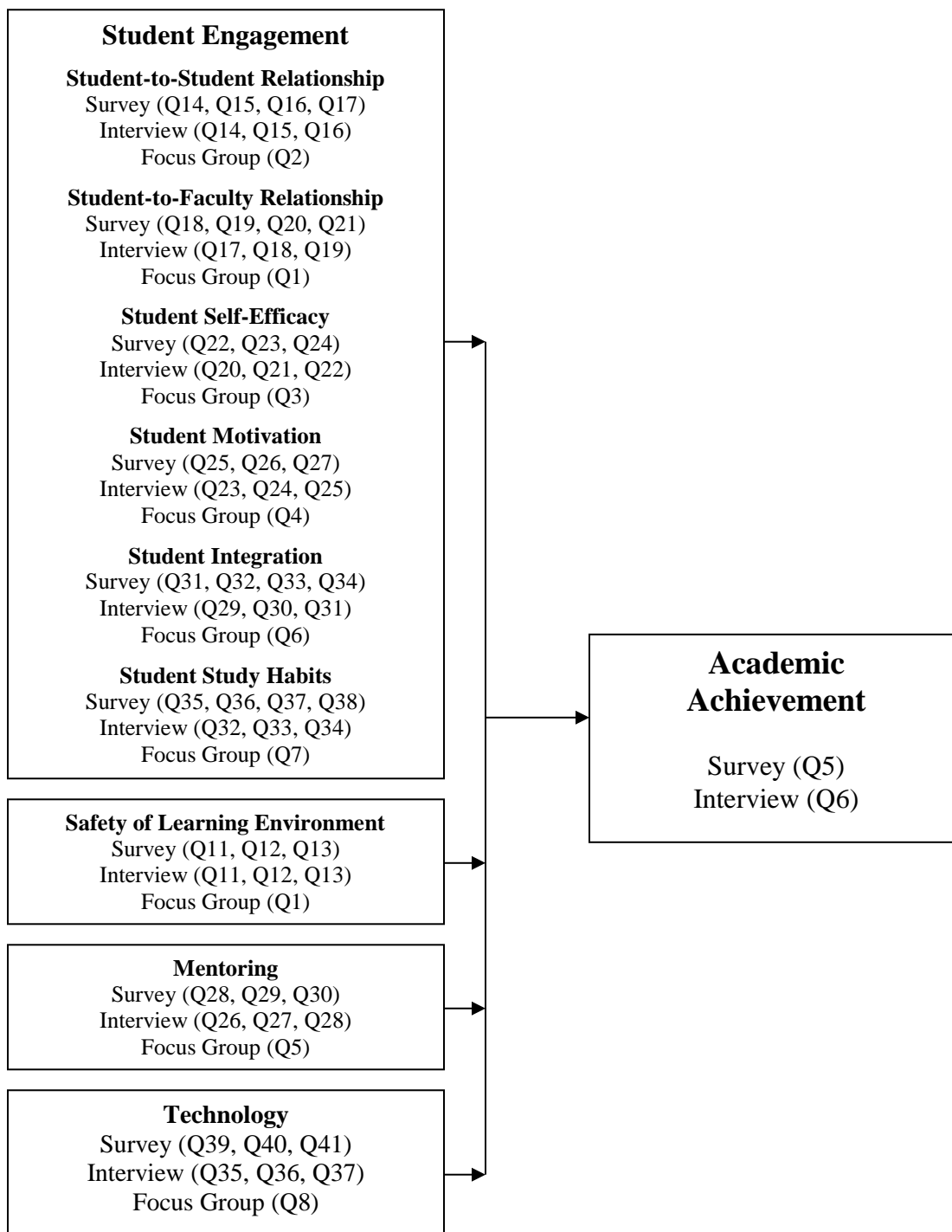


Figure 5. Relationship of independent variable to the dependent variables.

## Definition of Variables and Other Terms

This section lists the definitions that were used for the study.

### Dependent Variable

**Academic Achievement** is defined as the graduate student grade point average (GPA) measured by grades between 4.0 and 3.0 on a 4.0 scale in the most recent program of study (Korobova & Starobin, 2015).

### Independent Variables

**Engagement** is defined, for the purpose of this study, as the following variables:

**Safety of the Learning Environment:** An orderly, familiar, and non-threatening place inside and outside the classroom where graduates are comfortable and protected from harm (Milheim, 2012). Comfortable graduates often experience a safe and secure feeling.

**Student-to-Student Relationship:** Graduate student interactions among and between one another inside and/or outside the classroom (Wang & Anderson, 2014). Good student-to-student relationships include connecting with others, reflective discussions, exchange of contact information, and contact outside the classroom and/or campus.

**Student-Faculty Relationship:** Graduate students contact, connect, and/or interaction among faculty members inside and/or outside the classroom (Wang & Anderson, 2014).

**Self-Efficacy:** Beliefs in one's self confidence level and capabilities to organize, execute, and perform the course of actions necessary to perform a academic task or goal (Lowinger, He, Lin, & Chang, 2014). Graduate students with high self-efficacy take the lead on activities and are more likely to earn higher grades.

**Motivation:** The desire to perform an activity for the pleasure and satisfaction received internally or externally by the student for an accomplishment (Areepattamannil, Freeman, & Klinger, 2011).

**Faculty Mentoring:** Formal or informal structured relationships where the student receives faculty guidance (McAllister, Harold, Ahmedani, & Cramer, 2009).

**Student Integration:** Graduate students adopt the assumptions, values, and norms of the campus cultures (Museus, Nichols, & Lambert, 2008).

**Study Habits:** Proactive learner and/or peer directed plan of behavior, completing assignments with a focus on graduating which together transforming personal abilities into academic skills and achievements (Petersen, Lavelle, & Guarino, 2006).

**Technology:** The multimedia capabilities of interactive white boards (IWB) that provide users with a visual aspects of color and/or movement, an audio aspect of music, sound, and/or a audible voice (Hall & Higgins, 2005). IWBs also enable uses to connect computers, touch the interactive screens, and make presentations. IWBs provide students with increased motivation and engagement, along with greater levels of interaction with others (Hall & Higgins, 2005).

## **Other Terms**

**Interactive whiteboard** is defined as a large, touch screen sensitive electronic board driven by software and a connected desktop or laptop computer that projects images to a wall mounted or free standing board. The digital images can be manipulated with touch or a pen provided by the board manufacture (Hall & Higgins, 2005).

**Collaborative Learning** is defined as participants build knowledge through structured and deliberate academic content, skills, and disposition with other students in the classroom and with faculty members (Thompson et al., 2009).

**Effective Teaching Practices** are Principles used by faculty to maintain active involvement by setting high expectation and engaging students in active-learning (Crawford-Ferre & Wiest, 2012).

## **Relationship of Variables**

Previous research has identified a relationship between factors of engagement and academic achievement. The problem concerning the lack of engagement experienced by some African-American graduate students at HBCUs will be addressed as lack of engagement often leads to dropouts. Coupet and Barnum (2010) contended that graduation rates are significantly lower at HBCUs. Low graduation rates also pose a problem by increasing costs and decreasing institutional revenue (Coupet & Barnum, 2010). The relationship between the variables was investigated based on the theories and may lead to the development of a new theory of student engagement. According to Klem and Connell (2004), research has linked engagement with improved performance. Researchers have agreed based on findings that engagement has been found to be a

predictor of achievement regardless of the student socioeconomic status. Klem and Connell simply contended that engaged students are less likely to suffer from dropout and are more likely to obtain higher grades.

### **Limitations of the Study**

Typically during a research project there are limitations in areas beyond the control of the researcher. Limitations can interfere with the interpretation of the research findings. For this study, participants were asked to complete a survey, participate in an interview, and/or be part of a focus group. The researcher assumed that participants provided honest and true information for each research instrument. Blackhart, Brown, Clark, Pierce, and Shell (2012) contended that deception takes place when persons intentionally provide erroneous information. The participant's responses create a limitation for the proposed study as the accuracy of the data received has to be assumed. The way each participant perceives the question may be different, especially when considering what engagement means to each student. This limitation was minimized by providing the definition along with an example of engagement on each instrument. The researcher took measures to provide a contingency plan for information that may have negatively impacted the findings. Planning for such a limitation provided the researcher with an opportunity to enumerate the areas where control was limited or nonexistent.

Another limitation was that the researcher was familiar with some of the participants. The researcher previously worked and attended graduate school in the setting. Atieno (2009) held that behavior can be significantly influenced by the environment. To mitigate the situation, the researcher discussed the possible challenges

with the participants and signed the same consent form as all other participants. Atieno also held that conducting a study without considering a personal and account of the experience could violate the researchers view. The researcher performed what Atieno called a focus inquiry by thinking “about what needs to be asked in this research location as well as what you can ask and reasonably expect have answered given your resources and skills” (p. 15). Atieno agreed that such a process could help to increase the validity of the study.

### **Summary**

Chapter III provided the theoretical and conceptual framework for the study. Each theory presented contributed to a greater investigation of the relationship between the factors of engagement and academic achievement. The theories also guided the study and the expectations, while protecting the needs, privacy, and desire of the participants. The Chapter IV includes a discussion on how the qualitative and quantitative statistical analysis took place.

## CHAPTER IV

### RESEARCH METHODOLOGY

#### **Introduction**

This chapter is based on the research methodology in an effort to establish the framework for completing the research inquiry. The research methodology gives a description of the design, setting, collection procedures, and instruments. The purpose of this study was to investigate the relationship between factors of graduate student engagement and academic achievement, which may reveal the impact of (a) safety in the learning environment, (b) student-to-student relationships, (c) student-faculty relationships, (d) self-efficacy, (e) motivation, (f) faculty mentoring, (g) student integration, (f) study habits, (g) technology, and (h) demographic on academic achievement. The chapter provides a description and discussion on the mixed methodology. Chapter IV also discusses the sample procedures and methods for data collection to draw meaning from the data collected.

#### **Research Design**

The sample consisted of graduate students from the School of Education, School of Social Work, School of Business, and School of Arts and Sciences at a HBCU located in the Southeastern region of the United States. A mixed method case study approach was used for the proposed study to collect and analyze both quantitative and qualitative data. A triangulation method was used for data collection through multiple sources



including surveys, interviews, and focus groups. Data were obtained from the setting in which the students experienced the issue. A mixed method was selected to investigate the relationship between the factors of graduate student engagement and the influence on graduate student achievement. Kwok (2012) explained the mixed method as an approach which combines qualitative and quantitative viewpoints, analysis, and data collection, “for the broad purposes of breadth and depth of understanding and corroboration . . . mixed in the ways that offer the best opportunity for answering complex research questions” (p. 125). Mixed method case studies provide a better understanding of the problem than either a qualitative or quantitative approach can alone (Miller & Cameron, 2011).

The researcher used the Pearson  $r$  correlation coefficient for the quantitative portion to investigate the relationship between the factors of graduate student engagement and academic achievement. Data were analyzed using ANOVA, t-test, and a frequency distribution. The significance of the relationship was tested based on a .05 acceptable level of probability. Data were obtained from recorded interviews and focus groups for the qualitative portion of the proposed study. Qualitative data collection took place by using the case study method.

The research was conducted at an urban HBCU in the Southeastern region of the United States. A 41-item survey instrument with nine demographic items was administered to collect data from specialists, masters, and doctoral students from the School of Education, School of Social Work, School of Business, and School of Arts and Sciences. The researcher also conducted two focus groups. The focus group portion of

the study obtained additional detailed feedback regarding graduate student-to-student relationships, graduate student faculty mentoring, and graduate student integration. The focus group results may be used in future studies to help examine the relationship between factors of graduate student engagement and academic achievement.

### **Description of the Setting**

The data were collected from four graduate schools at an HBCU located in the Southeastern region of the United States. The university offers graduate programs in four different schools. The instruments were only presented to graduate students currently enrolled in graduate programs. During the 2016 spring enrollment, the University had an estimated population of 3,850 students. The graduate population was 904 graduate students. There were 346 graduate students enrolled in the School of Social Work, 322 graduate students enrolled in the School of Arts and Sciences, 156 graduate students enrolled in the School of Education, and 84 graduate students enrolled in the School of Business. Graduate degrees are available at the master's, specialist, and doctoral levels.

The University's website reveals that the School of Arts and Sciences has master's programs in African-American Studies, Africana Women's Studies, Biological Science, Chemistry, Computer and Information Systems, Criminal Justice, English, Foreign Languages, History, Mathematical Sciences, Physics, Political Science, Public Administration, and Sociology. Doctoral degrees are available for the following disciplines: African-American Studies, Biology, Chemistry, English, Romance Languages, History, Humanities, and Political Science. The School of Business offers master's programs in Accounting and Masters of Business Administration with

concentrations in Accounting, Entrepreneurship Management, Finance, Marketing, Sports and Entertainment, Management, and Supply Chain Management. The School of Social Work offers master's programs in Families and Children, and Health & Mental Health. Students may also pursue a doctoral degree in Social Work Planning, Policy, and Administration. The School of Education has a doctoral degree in Educational Leadership. Master's programs include Community Counseling, Educational Leadership, and Mathematics in Education, School Counseling, Special Education, and Teaching Science.

### **Sample Procedures**

This study focused on graduate students from the School of Education, School of Social Work, School of Business, and the School of Arts and Sciences attending a historically black college and university (HBCU) during the 2016 spring semester. The researcher recruited graduate students from each school to participate in the research for the survey. The focus group and interview participants were recruited during the surveys to be selected based on graduate students' availability and willingness. The sample sizes for the survey, focus groups, and interview questions were 209, 16, and 8 graduate students, respectively. Convenience samples were used to gathering participants that were available and willing to participate in the study. A purposeful sample was also used to allow the researcher to select from the available participants. The samples were stratified by each school to include the School of Education, School of Social Work, School of Business, and School of Arts and Sciences.

### **Working with Human Subjects**

The data gathered from the study will remain confidential. All graduate students were recruited by talking to students before, during, and/or after class, asking them to participate in a survey. Students that agreed to be surveyed were required to sign a consent form and provided a paper survey. The informed consent form required the student to sign the form before proceeding with the survey. The participant's identity will remain concealed as the instrument did not ask for names or any other information that directly linked the participant to the proposed study. Participants who agreed to complete the survey were provided with a form to provide their name and phone number in order to schedule the interview and/or focus group. Graduate students that agreed to participate were provided background on the study along with an explanation of the study's purpose. Confidentiality required acceptance by checking a box indicating that the participant agreed to participate and was aware of the research conditions.

### **Instrumentation**

For the study, three data sources were used. The sample sizes for the survey, focus groups, and interview questions were 209, 16, and 8 graduate students, respectively. Surveys, interviews, and focus group session instruments were developed by the primary researcher and members of the dissertation committee. Each source asked about participants' gender and school of attendance. Validity required asking each participant the same questions. Quantitatively, paper surveys were provided to graduate students in order to collect data on dependent and independent variables. Statements on each variable were rated on a five-point Likert scale: (a) strongly agree, (b) agree, (c)

uncertain, (d) disagree, and (d) strongly disagree. Participants were recruited as the researcher introduced the study by talking to graduate students and asking for participation. The paper surveys were distributed to graduate students that agreed to participate in the study. All graduate student participants who completed the survey were asked to participate in the interview and/or the focus group. Additional questions were asked based on responses to previous questions (see Appendix A for Survey Questions).

The interviews were conducted in designated classroom areas of each school as approved by the administration. The objectives of the interviews were to conduct a semistructured, open-ended interview of 37 questions. The researcher did not expect a response rate higher than 20%. The researcher also interviewed two students from each department. The interviews were audio taped, transcribed, tabulated, and coded. Participants were emailed copies of the interviews if requested. The data were examined and coded in an effort to investigate the relationship between factors of graduate student engagement and academic achievement (see Appendix B for the Interview Questions).

The qualitative method also included conducting four focus group sessions, each consisting of only three to five graduate students from the same graduate school. The focus group participants were prescreened and invited to participate in the focus groups during the survey completions. Data collection was ensured and the researcher used a recording device. The focus group protocol started with an overview of the study and the expected outcomes. Participants were then required to sign a confidentiality consent form. Questions presented to the focus groups were broad, aligned with the research questions, and open-ended in nature in order to substantiate feedback from the

participants. Focus group and interviews took place in a designated area in each department approved by the administration. Focus group sessions were conducted to enable a more robust qualitative analysis (see Appendix C for the Focus Group Questions).

### **Participant/Location of Research**

The study focused on graduate students enrolled in the Schools of Arts and Sciences, Business, Education, and Social Work at a HBCU in the Southeastern section of the United States during the 2015-2016 academic year. Graduate students from the four schools were recruited just before attending class, yet only the participants that agreed to participate were considered for the study. The proper channels were used by the researcher to gain the access and approval to the research setting.

### **Data Collection Procedures**

According to Kristjansson, Sigfusson, Sigfusdottir, and Allegrante (2013), cross-sectional data, as opposed to longitudinal data, do not compromise data anonymity. “In addition, pencil-and-paper responses are still favored over computerized responses for the same reason” (Kristjansson et al., 2013, p. 66). The following procedures were used to collect data from the participants:

1. The researcher ensured the instruments validity and reliability by developing the instrument in collaboration with the research faculty in the educational leadership department.
2. The researcher submitted the instruments and obtained approval to conduct the study from the Institution Review Board (IRB).

3. The researcher identified a contact person from each school to assist with administering the survey instruments.
4. The researcher provided participants with a paper survey in person before class.
5. The researcher received the paper surveys completed by the participants.
6. The researcher followed up in each department to increase the sample size as needed.
7. The researcher downloaded all responses from the surveys directly into IBM's Statistical Package for the Social Science (SPSS) version 23.
8. The researcher met with graduate students in one classroom and a conference room in each department to complete the interviews and focus groups.
9. The researcher coded responses from the interviews directly into Microsoft Word.
10. The researcher conducted four focus group; each containing only graduate students from the same graduate school.
11. The researcher conducted two personal interviews with participants from each of the four schools.
12. The researcher code responses from the interviews and focus groups for analysis directly into Microsoft Word.
13. The researcher triangulated the data by utilizing the three data collection methods and sources.
14. The researcher analyzed the survey data with SPSS and compiled the results.

### **Statistical Application (Quantitative)**

The researcher used the Statistical Package for the Social Sciences (SPSS) software to analyze the graduate students' survey. SPSS was used to administer the Pearson correlation tests in order to analyze the relationship between factors of engagement and academic achievement. The Post Hoc was also used to provide an analysis of the relationship among some significant variables. The independent variables include (a) safety in the learning environment, (b) graduate student to graduate student relationships, (c) graduate student to faculty relationships, (d) graduate students' self-efficacy, (e) graduate students' motivation, (f) graduate students' faculty mentoring, (g) graduate students' integration, (h) graduate students' study habits, and (i) graduate students' use of technology. The dependent variable was graduate students' academic achievement. Codes and themes emerged as the interviews and focus groups were transcribed and analyzed. The relationship between the factors of graduate student engagement and academic achievement was also examined. SPSS also enabled the researcher to perform a regression analysis.

### **Description of Data Analysis Methods (Qualitative)**

According to Creswell (2007), survey results, interviews, and focus group session transcription utilization includes the emergence of issue-relevant meanings. The sample sizes for the survey, focus groups, and interview questions were 209, 16, and 8 graduate students, respectively. The data through analysis revealed themes used to develop generalization providing implications for present and future leadership teams.



### **Limitations of the Study**

The graduate students were allowed to self-report the data and also place a limitation on the study. The challenge of students providing honest and factual data was mitigated by providing students with the survey, interview, and focus group protocol. Difficulties with graduate students being less than honest were also minimized. Graduate students signed a consent form concerning confidentiality. Graduate students were also provided with an option to receive results electronically. The option to receive an email was used to increase trust with the students and possibly increase honest and factual data. Another limitation was encountered as the researcher was challenged to ensure that graduate students properly understood the survey, interview, and focus group questions. The areas of race and GPA may have caused students to be hesitant in fear that such personal information was provided. This limitation was minimized by ensuring graduate students that the data would be encrypted, locked up, and only available to the researcher. Other limitations include:

- Graduate student participation was only open to current students enrolled in the 016 spring semester. This created a limitation, as students from all previous and future semesters were not allowed to participate.
- The researcher has worked closely with some of the graduate students in the target population as a member of the university technology staff. Some recruits may have had a level of obligation to participate in the study. Familiarity may have created a level of expected or optimal responses by the participants.

- The researcher worked closely with some of the faculty members. Some faculty members may have felt obligated to allow the researcher to recruit graduate students prior to class meeting.
- A few of the faculty member introduced the researcher at the beginning of his/her course before the researcher asked graduate students to participate in the survey. The introduction may have had an impact on the graduate student responses to the survey.
- The extremely small study was a limitation. There were eight graduate students that took part in the interviews and 16 graduate students took part in the focus groups.
- The data for the dependent variable (academic achievement/grade point average) were self-reported by the students and is a limitation. Because of how academic achievement was defined and collected, the findings or lack of statistical significance between the variables may have been a result of the self-reporting. The grade range provided for self-reporting was an attempt to obtain higher levels of student honesty.
- The percentage of graduate students surveyed and interviewed provided a limitation, but also helped to explain the findings (see Table 1).
- The sizes and time of class session (A.M. & P.M.) may have accounted for the findings.

Table 1

*Percentage of Population Participants in Surveys, Interviews and Focus Groups*

Graduate School	# Enrollment	Class Times	# Surveyed	#Interviewed	# of Focus Groups
Social Work	346	P.M. Only	76 (22%)	2 (.56%)	3 (.87%)
Arts & Sciences	322	A.M. & P.M.	42 (13%)	2 (.64%)	6 (1.9%)
Education	156	P.M. Only	43 (28%)	2 (1.3%)	3 (1.9%)
Business	84	A.M. Only	48 (57%)	2 (2.4%)	4 (4.8%)
Total	908		209	8	16

### Summary

This chapter discussed the research methodology using the framework to guide the inquiry. The research methodology provided a description of the design, setting, collection procedures, and instruments. The chapter also explained how the data were analyzed along with the ways in which the researcher conducted the study. The purpose of the study was to investigate the relationship between factors of graduate student engagement and academic achievement which revealed the impact of (a) safety in the learning environment, (b) student-to-student relationships, (c) student-to-faculty relationships, (d) self-efficacy, (e) motivation, (f) faculty mentoring, (g) student integration, (f) study habits, (g) technology, and (h) demographic on academic achievement. Chapter IV discussed the sample procedures and methods for data collection to draw meaning from the data collected. The chapter also presented a description and discussion on the mixed methodology. The qualitative approach used themes derived from the data to provide the researcher with a better view of the problem.

The quantitative approach provided the researcher with an examination of the relationship between the independent and dependent variables. Together, each view provided more of a holistic picture to the researcher.

CHAPTER V  
ANALYSIS OF THE DATA

**Introduction**

This chapter represents the results of the mixed method approach where three data instruments were used to collect both quantitative and qualitative data. Chapter V also provides information on participant demographics and participant selection. An analysis of the quantitative from the surveys and qualitative data from the interviews and focus group are also presented.

The purpose of the study was to examine the relationship between factors of graduate student engagement and academic achievement. Miller and Cameron (2011) agreed that the mixed method design has been used extensively and has been accepted in the field of education: “Mixed methodologies refer to approaches in which quantitative and qualitative research techniques are integrated into a single study” (p. 389). The mixture of quantitative and qualitative designs can also provide a better understanding of the problem (Miller & Cameron, 2011). The mixed method helps the researcher to better understand the participants, allowing the researcher to use multiple data sources to make stronger conclusions. The chapter reviews the research questions and discusses the analysis of the data. The process of performing the data analysis was based on the research questions determined by the theoretical framework.

Ethical issues were addressed during data collection by explaining the educational purposes of the study to all participants. Prior to initiating the surveys, interviews, and focus groups participants were given the opportunity to stop participating in the study at any time. The researcher also protected the anonymity of the survey, interview, and focus group participants by ensuring each person that his/her name would not appear on or be stored near data sources.

The researcher obtained permission to perform the study from the Institutional Review Board (IRB) (see Appendix D). The researcher then requested and obtained approval from graduate students to participate in the study. Protocols for the research included a surveys, interviews, and focus groups (see Table 1 in Chapter IV). A consent form was provided and signed by each participant prior to participating in the survey, interview, or focus group (see Appendix E). Data were collected over a period of 8 weeks from February 22, 2016 through April 15, 2016.

The survey instrument was distributed to graduate students in the School of Education, School of Social Work, School of Business, and School of Arts and Sciences (see Appendix F). The survey was completed by a total of 209 graduate students. Survey and participant responses were kept confidential and anonymous as the graduate students completed the survey just before beginning classes. Surveys were given over a four week timeframe. Forty-one items were on the survey and the expected completion time ranged from 20 to 40 minutes.

There were 8 interview participants and 16 focus group participants; a recruitment protocol was given to each participant (Appendix G). Graduate students that agreed to

participate then received the interview protocol (Appendix H]. The researcher then interviewed two graduate students from each school using the graduate student interview (see Appendix B). The interviews were taped and later transcribed providing the opportunity to obtain themes from coding the data.

The researcher also conducted four focus groups with a total of 16 graduate students. One focus group consisted of three participants from the School of Education; focus group session two had four graduate students from the school of Business; session three had three graduate students from the school of Social Work; and focus group session four had six graduate students from the school of Arts and Science. Each focus group session lasted between 40-60 minutes. The graduate students in each focus group were asked nine focus group questions (see Appendix C). Table 2 shows the alignment of research protocols to research questions.

Table 2

*Alignment of Research Protocols to Research Questions*

		Survey	Interview	Focus
	Research Question	Questions	Questions	Group
				Questions
RQ1	Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?	11, 12, 13	11, 12, 13	
RQ2	Is there a significant relationship between graduate student-to-student relationships and academic achievement?	14, 15, 16, 17	14, 15, 16	2
RQ3	Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?	18, 19, 20, 21	17, 18, 19	

Table 2 (continued)

		Survey Questions	Interview Questions	Focus Group Questions
RQ4	Is there a significant relationship between graduate students' self-efficacy and academic achievement?	22, 23, 24	20, 21, 22	
RQ5	Is there a significant relationship between graduate students' motivation and academic achievement?	25, 26, 27	23, 24, 25	
RQ6	How does graduate students' mentoring influence academic achievement?	28, 29, 30	26, 27, 28	5
RQ7	How does graduate students' integration influence academic achievement?	31, 32, 33, 34	29, 30, 31	6
RQ8	Is there a significant relationship between graduate students' study habits and academic achievement?	35, 36, 37, 38	32, 33, 34	
RQ9	Is there a significant relationship graduate students' use of technology and academic achievement?	39, 40, 41	35, 36, 37	
RQ10	Which independent variable has the greatest impact on academic achievement?		5	
RQ11	Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?			

### Descriptive Summary

The researcher conducted surveys, interviews, and focus groups with graduate students from the School of Education, School of Social Work, School of Business, and School of Arts and Sciences at a historically black college and university (HBCU) located in the Southeastern region of the United States. The qualitative data derived from



interviews that reflected graduate student feelings while also discovering additional information. Focus groups were used to discover benefits derived from group conversations. Connelly (2015) agreed that focus groups can provide a way to structure a conversation to address the topic and discover benefits from the group discussion. The data collection instruments also included questions about graduate programs of study (Education, Social Work, Business, and Arts and Sciences), sex (male or female), race (African American, white, Arab, Hispanic, and other), and academic achievement operationalized at graduate student grade point average. A total of 209 graduate students agreed and responded to the surveys for a return rate of 35% for the graduate students presented (584 graduate students) with an opportunity to participate and a return rate of 23% for the entire graduate school population (904 graduate students). Data were collected over a period of six weeks from March 31, 2016 through May 12, 2016.

### **Description of Data Analysis Methods (Quantitative)**

The researcher used quantitative analysis to analyze and discuss the relationships between the independent and dependent variables. IBM's Statistical Package for the Social Science (SPSS) was used to analyze the graduate student survey data. SPSS was used to run the Pearson correlation test to analyze the relationship between the independent variable's and the dependent variable. The Post Hoc was also used to further analyze the difference among the independent variables. The research questions based on relationships were tested based by a correlation analysis. A regression analysis may be proposed to test the impact of the independent variables on academic

achievement. Polit (2010) contended that regression techniques “used to analyze relationships between variables and to make predictions about values of variables” (p. 208). Polit held that the SPSS regression program could be used to calculate the  $r^2$  that can be adjusted to closely reflect the goodness-of-fit in the regression model of the population.

### **Description of Data Analysis Methods (Qualitative)**

The qualitative portion of the research study was used to analyze the emergent themes. Data were analyzed based on measuring the variables on a nominal scale. According to Creswell (2013), qualitative research begins based on assumptions where the principal researcher is encouraged to use interpretive/theoretical frameworks to guide the study and address the social or human problems. The key characteristics of the study include conducting research in the participants’ college setting using multiple data collection methods for triangulation while also focusing on the perceptions of the participants. Yin (2009) contended that a case study analysis was appropriate for analysis of one phenomenon in context to the background. The researcher performed eight interviews with two participants per department: School of Education, School of Social Work, School of Business, and the School of Arts and Sciences. The researcher transcribed, coded, and noted the themes immediately after each interview. The researcher also conducted two focus group sessions. The focus group sessions were transcribed as noted and themes derived. The final objective was to code the interviews and focus groups in order to analyze the data.

### **Analysis of Descriptive Data**

The purpose of the study was to investigate the relationship between factors of graduate student engagement and academic achievement. Survey data were collected to examine the relationship among the following independent and dependent variables:

(a) safety in the learning environment, (b) student-to-student relationships, (c) student-to-faculty relationships, (d) self-efficacy, (e) motivation, (f) faculty mentoring, (g) student integration, (h) study habits, (i) technology, and (j) demographic on academic achievement. The dependent variable was graduate student academic achievement. Instruments were only given to graduate students enrolled during the spring of 2016 semester.

Survey questions were developed to examine the existence of statistical significance between variables. Other areas pertinent to graduate student engagement were viewed as possible factors that could influence engagement. Technology was operationalized as the use of Interactive White Boards (IWBs) in order to examine any statistical significance with graduate academic achievement. T-tests and ANOVA's were performed to check for significance difference between variable and to analyze the survey data.

The demographic data for the graduate student participants also analyzed using descriptive statistics. Survey questions 1-10 captured demographic data about the respondents' graduate program and school, grade point average (GPA), race, and sex. Approximately 904 graduate students combined were enrolled in the four graduate programs. The faculty allowed the researcher to present the graduate student survey to

nearly 600 graduate students in the beginning of prescheduled classes. The race of graduate students included African-American, white, Arab, Hispanic, and others. Analyses of the results reveal that of the 209 respondents, 130 (64%) were female and 73 (36%) were male (see Table 3). Table 3 indicates the response rate based on gender.

Table 3

*Gender of Participants*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	130	62.2	64.0	64.0
	Male	73	34.9	36.0	100.0
	Total	203	97.1	100.0	
Missing	System	6	2.9		
Total		209	100.0		

The results about the four graduate schools indicated that 42 (20.1%) of the graduate student participants were enrolled in the School of Arts and Sciences, 43 (20.6%) of the graduate student participants were enrolled in the School of Education, 48 (23%) of the participants were enrolled in the School of Business, and 76 (36.4%) of the remaining participants were enrolled in the School of Social Work (see Table 4).

Table 4

*Participants by Graduate School*

	Frequency	Percent	Valid Percent	Cumulative Percent
Arts and Science	42	20.1	20.1	20.1
Education	43	20.6	20.6	40.7
Business	48	23.0	23.0	63.6
Social Work	76	36.4	36.4	100.0
Total	209	100.0	100.0	

Further analysis was conducted representing additional factors of graduate students. Nearly 73% of the respondents were attending their first graduate program, while approximately 27% of the respondents were not attending their first graduate program (see Table 5). Table 5 indicates the number of students in their first graduate program.

Table 5

*First Graduate Program*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	56	26.8	26.8	26.8
Yes	152	72.7	72.7	99.5
2.00	1	.5	.5	100.0
Total	209	100.0	100.0	

The analysis displays 163 (76%) of the respondents were not the first person in the family to attend college, yet 46 (22%) of the participants were the first person in the

family to attend college (see Table 6). Table 6 indicates the students that were the first person in their family to attend college.

Table 6

*First Person in the Family to Attend College*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	163	78.0	78.0	78.0
Yes	46	22.0	22.0	100.0
Total	209	100.0	100.0	

The sample sizes for the survey, focus groups, and interview questions were 209, 16, and 8 graduate students, respectively. In regards to the study of examining the relationship between the factors of graduate student engagement and academic achievement at a HBCU, a total of 209 participants responded to the inquiry about the graduate student experience as the first person in the family to graduate from college. Nearly 74% of the respondents were not the first person in their family to graduate from college; likewise, 26% of the participants were the first person in the family to graduate from college (see Table 7). Table 7 indicates if the student was the first person in their family to graduate from college.

Table 7

*First Person in the Family to Graduate from College*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	154	73.7	73.7	73.7
Yes	55	26.3	26.3	100.0
Total	209	100.0	100.0	

In relation to the study of examining the relationship between the factors of graduate student engagement and academic achievement at a HBCU, a total of 209 survey respondents responded to the inquiry about grade point average (GPA).

Table 8 displays that of the 209 respondents, 110 (52.6%) had a GPA between 3.75 - 4.00, 49 (23.4%) had a GPA between 3.50 - 3.74, 20 (9.6%) had a GPA between 3.25 - 3.49, 28 (13.4%) and 2 (1%) of the respondents did not answer.

Table 8

*Graduate Students' Grade Point Average*

	Frequency	Percent	Valid Percent	Cumulative Percent
3.75 - 4.00	110	52.6	52.6	52.6
3.50 - 3.74	49	23.4	23.4	76.1
3.25 - 3.49	20	9.6	9.6	85.6
3.00 - 3.24	28	13.4	13.4	99.0
5.00	2	1.0	1.0	100.0
Total	209	100.0	100.0	

In regards to the study of examining the relationship between the factors of graduate student engagement and academic achievement at a HBCU, a total of 209 participants responded to the inquiry about the number of years in the current graduate program. There were 84 (40.2%) first-year graduate students, 79 (37.8%) second-year graduate students, 29 (13.9%) third-year graduate students, 13 (6.2%) fourth-year graduate students, 3 (1.4%) fifth-year graduate students, and one (.5%) of the graduate students did not answer the question (see Table 9). Table 9 indicates the number of years the students have completed in the current graduate program.

Table 9

*Number of Years in the Current Graduate Program*

	Frequency	Percent	Valid Percent	Cumulative Percent
First Year	84	40.2	40.2	40.2
Second Year	79	37.8	37.8	78.0
Third Year	29	13.9	13.9	91.9
Fourth Year	13	6.2	6.2	98.1
Fifth Year	3	1.4	1.4	99.5
6.00	1	.5	.5	100.0
Total	209	100.0	100.0	

In regards to the study of examining the relationship between the factors of graduate student engagement and academic achievement at a HBCU, a total of 209 participants responded to the inquiry about the graduate student race. Table 10 displays that of the 209 respondents, 40 (19.1%) were African American, 1 (.5%) was white, 41 (19.6%) were Arab, 18 (8.6%) of the respondents selected other, and one respondent chose more than one race category.

Table 10

*Ethnicity of Graduate Students*

	Frequency	Percent	Valid Percent	Cumulative Percent
African American	148	70.8	70.8	70.8
White	1	.5	.5	71.3
Arab	41	19.6	19.6	90.9
Other	18	8.6	8.6	99.5
Selected 2 or More	1	.5	.5	100.0
Total	209	100.0	100.0	



In regards to the study of examining the relationship between the factors of graduate student engagement and academic achievement at a HBCU, a total of 209 participants responded to the inquiry about receiving financial aid in the form of loans. The results indicated that 168 (80.4%) of the respondents did receive financial, 40 (19.1%) did not receive financial aid, and one graduate student did not answer the question (see Table 11). Table 11 indicates if the student did or did not receive financial aid to attend graduate school.

Table 11

*Financial Aid Recipients*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	40	19.1	19.1	19.1
Yes	168	80.4	80.4	99.5
2.00	1	.5	.5	100.0
Total	209	100.0	100.0	

### **Dependent Variable and Data Analysis**

#### **Safety of the Learning Environment**

The following research questions were designed to gather information about the factors of graduate student engagement in order to examine the relationship between academic achievement.

- RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?
- RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?

- RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?
- RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?
- RQ5. Is there a significant relationship between graduate students' motivation and academic achievement?
- RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?
- RQ9. Is there a significant relationship between graduate students' use of technology and academic achievement?
- RQ10. Which independent variable has the greatest relationship with academic achievement?
- RQ11. Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?

The central qualitative research questions submitted by the researcher were as follow:

- RQ6. How does graduate student faculty mentoring influence academic achievement?
- RQ7. How does graduate student integration influence academic achievement?

A mixed method research question was required to combine both quantitative and qualitative data obtained from the study. The study addressed the following mixed method question: *In what ways do the data obtained from graduate student surveys regarding the relationship between factors of graduate student engagement and*

*academic achievement help explain the themes identified graduate student academic achievement?*

### Quantitative Data Analysis

A Pearson correlation was performed to examine the relationship between the factors of graduate engagement and academic achievement. Surveys were given to graduate students during the 2016 spring semester. Analysis of the data from the surveys also took place in the 2016 spring semester. Survey questions pertaining to the academic achievement of graduate students were separated by two positive questions, one neutral question, and two negative questions to help underscore the importance of the relationship between graduate student engagement factors and academic achievement. The alignment of the variables and survey, interview, and focus group question provide an overview of the study (see Table 12). Table 12 indicates the alignment of the variables, research, and survey questions.

Table 12

#### *Alignment of Variables, Research Questions, and Survey Questions*

Variable	Research Question	Survey Questions	Interview Questions	Focus Group Questions
Demographics		1-10	1-10	
Academic Achievement		5	6	
Safety of Learning Environment	RQ1: Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?	11, 12, 13	11, 12, 13	

Table 12 (continued)

Variable	Research Question	Survey Questions	Interview Questions	Focus Group Questions
Graduate Student-to-student Relationships	RQ2: Is there a significant relationship between graduate student-to-student relationships and academic achievement?	14, 15, 16, 17	14, 15, 16	2
Graduate Student to Faculty Relationships	RQ3: Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?	18, 19, 20, 21	17, 18, 19	
Graduate Student Self-Efficacy	RQ4: Is there a significant relationship between graduate students' self-efficacy and academic achievement?	22, 23, 24	20, 21, 22	
Graduate Student Motivation	RQ5: Is there a significant relationship between graduate students' motivation and academic achievement?	25, 26, 27	23, 24, 25	
Graduate Student Mentoring	RQ6: How does graduate students' mentoring influence academic achievement?	28, 29, 30	26, 27, 28	5
Graduate Student Integration	RQ7: How does graduate students' integration influence academic achievement?	31, 32, 33, 34	29, 30, 31	6
Graduate Student Study Habits	RQ8: Is there a significant relationship between graduate students' study habits and academic achievement?	35, 36, 37, 38	32, 33, 34	
Graduate Student use of Technology	RQ9: Is there a significant relationship graduate students' use of technology and academic achievement?	39, 40, 41	35, 36, 37	

## Research Questions and Quantitative Analysis of Survey

### Safety in the Learning Environment and Academic Achievement

The following tables provide the correlation results calculated with SPSS. The results indicated that there were no significant relationships for any of the independent variables listed in the tables.

RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?

A Pearson correlation was performed to examine the relationship between graduate student safety of the learning environment and academic achievement. The survey questions were developed to incorporate a mixture of two positive, one neutral, and two negative questions. Significance was set at the .05 level. The analysis determined that there was no significant relationship between safety of the learning environment and academic achievement (see Table 13). Table 13 indicates the Pearson correlation between safety in the learning environment and academic achievement.

Table 13

*Pearson Correlation: Safety in the Learning Environment and Academic Achievement*

		Q05: What is your GPA	Safety Environ
Q05: What is your GPA	Pearson Correlation	1	.089
	Sig. (2-tailed)		.199
	N	209	209

Graduate student safety in the learning environment and academic achievement lack of statistical significance may be explained by how the questions were framed: 64%

of the graduate students were female; 73% were attending their first graduate program which may indicate that first-time female graduate students were unable to obtain a high degree of safety in the learning environment. A further analysis of the relationship between safety in the learning environment and academic achievement may be needed based on the data.

### **Graduate Student-to-Student Relationships and Academic Achievement**

RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?

An analysis of the survey data indicates that there is no statistically significant relationship between graduate student-to-student relationships and academic achievement (see Table 14). The responses from the survey instrument related to the questions about graduate student-to-student relationships demonstrated that graduate student-to-student relationships show no statistically significant relationship with academic achievement according to the probability values. Significance was set at the .05 level. Table 14 also reveals that the probability value for graduate student-to-student relationship was greater than the .05 level. Graduate student-to-student relationships and academic achievement lack of statistical significance may be explained as nearly 83% of the graduate students felt positive about graduate to graduate student relationships, 15% of the graduate students recorded neutral responses and 2% of the respondents recorded a negative response about graduate student relationships. A further analysis of the relationship between graduate student-to-student relationships and academic achievement may be needed based on the data.

Table 14

*Pearson Correlation: Graduate Student-to-Student Relationships and Academic Achievement*

		Q05: What is your GPA	Grad_Student_ Relationship
Q05: What is your GPA	Pearson Correlation	1	-.009
	Sig. (2-tailed)		.900
	N	209	209

### **Graduate Student-to-Faculty Relationships and Academic Achievement**

RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?

Table 15 indicates that the observed probability value for graduate student to faculty relationships was greater than .05, suggesting no statistically significant relationship between graduate student-to-faculty relationships and academic achievement. A further analysis of the relationship between graduate student to faculty relationships and academic achievement may be needed based on the data.

Table 15

*Pearson Correlation: Graduate Student-to-Faculty Relationships and Academic Achievement*

		Q05: What is your GPA	Std_Fac_Rel
Q05: What is your GPA	Pearson Correlation	1	.122
	Sig. (2-tailed)		.078
	N	209	209

### **Graduate Student Self-Efficacy and Academic Achievement**

RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?

A Pearson correlation was performed to examine the relationship between graduate student self-efficacy and academic achievement. Graduate students were asked to rate their confidence level regarding their ability to complete the assignments and graduate from the program. Significance was set at the .05 level. The analysis determined no statistically significant relationship between graduate student self-efficacy and academic achievement. The results of the Pearson correlation are shown in Table 16. Table 16 indicates the Pearson correlation between graduate students' self-efficacy and academic achievement.

Table 16

*Pearson Correlation: Graduate Students' Self-Efficacy and Academic Achievement*

		Q05: What is your	
		GPA	GStudent_Self_Efficacy
Q05: What is your GPA	Pearson Correlation	1	-.047
	Sig. (2-tailed)		.500
	N	209	209

### **Graduate Student Motivation and Academic Achievement**

RQ5. Is there a significant relationship between graduate students' motivation and academic achievement?



A Pearson correlation was performed to examine the relationship between graduate students' motivation and academic achievement. The survey questions were developed to incorporate a mixture of 2 positive, 1 neutral, and 2 negative questions. Significance was set at the .05 level. The analysis determined no statistically significant relationship between graduate student motivation and academic achievement (see Table 17). Table 17 indicates the Pearson correlation between graduate student motivation and academic achievement. A further analysis of the relationship between graduate student motivation and academic achievement may be needed based on the data.

Table 17

*Pearson Correlation: Graduate Student Motivation and Academic Achievement*

		Q05: What is your GPA	GStudent_Motivation
Q05: What is your GPA	Pearson Correlation	1	-.115
	Sig. (2-tailed)		.097
	N	209	209

### **Graduate Student Study Habits and Academic Achievement**

RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?

An analysis of the data indicates that there is no statistically significant relationship between graduate student study habits and academic achievement. The responses from the survey instrument related to the questions about graduate student study habits demonstrated that graduate student study habits shows no statistically significant relationship between academic achievement according to the probability

values (see Table 18). Significance was set at the .05 level. Table 18 also reveals that the probability value for graduate student study habits was greater than .05. A further analysis of the relationship between graduate student study habits and academic achievement may be needed based on the data.

Table 18

*Pearson Correlation: Graduate Students' Study Habits and Academic Achievement*

		Q05: What is your GPA	Study_Habits
Q05: What is your GPA	Pearson Correlation	1	.096
	Sig. (2-tailed)		.167
	N	209	209

**Graduate Student use of Technology and Academic Achievement**

RQ9. Is there a significant relationship between graduate students' use of technology and academic achievement?

A Pearson correlation was performed to examine the relationship between graduate students' use of technology and academic achievement. The survey questions were developed to incorporate a mixture of two positive, one neutral, and two negative questions. Significance was set at the .05 level. The analysis determined no statistically significant relationship between graduate student use of technology and academic achievement (see Table 19). Table 19 indicates the Pearson correlation between graduate students' use of technology and academic achievement. A further analysis of the relationship between graduate use of technology and academic achievement may be needed based on the data.

Table 19

*Pearson Correlation: Graduate Students' Use of Technology and Academic Achievement*

		Q05: What is your GPA	IWB
Q05: What is your GPA	Pearson Correlation	1	-.074
	Sig. (2-tailed)		.290
	N	209	208

**Greatest Impact of Independent Variables and Academic Achievement**

RQ10. Which independent variable has the greatest relationship with academic achievement?

A regression analysis was performed to examine which independent variable had the greatest impact on academic achievement. Table 20 indicates that motivation was the independent variable that had the greatest impact on academic achievement. Motivation (.016) was less than .05, indicating a statistical significance between graduate student motivation and academic achievement. Dancer and Tremayne (2005) explained the  $R^2$  as a statistic that measures the variation in the response variable indicated by the regression. Motivation indicated an  $R^2$  change of .028 or 2.8% impact on academic achievement.

Faculty mentoring indicated a .027 which is less than .05 indicating a statistical significance between graduate student faculty mentoring and academic achievement. Mentoring indicated an  $R^2$  change of .024 or 2.4% had the second greatest impact among variables on academic achievement. Together the variable indicate a 5.2% impact on academic achievement, which also indicated many other factors that impact graduate students' academic achievement.

Table 20

*Regression Analysis of the Independent Variables Motivation and Mentoring on Academic Achievement*

<b><u>Model Summary</u></b>									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F	df1	df2	
1	.153 <sup>a</sup>	.024	.019	1.09224	.024	4.960	1	206	.027
2	.226 <sup>b</sup>	.051	.042	1.07935	.028	5.948	1	205	.016

a. Predictors: (Constant), Faculty Mentoring

b. Predictors: (Constant), Faculty Mentoring, Motivation

### **Difference among Independent Variable and School**

RQ11. Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?

An analysis of Variance (ANOVA) was conducted to determine if there were significant differences among the schools on each of the independent variables. Table 21 shows a significant differences between Safety of the Environment (Sig: .007), Student-Faculty Relationships (Sig: .000), Mentoring (Sig: .000), Student Integration (Sig: .002), and Student Study Habits (Sig: .005).

Table 21

*Difference among Independent Variables Based on School*

<b><u>ANOVA</u></b>						
		Sum of Squares	df	Mean Square	F	Sig.
SafetyofEnviron	Between Groups	102.600	3	34.200	4.170	.007
	Within Groups	1681.380	205	8.202		
	Total	1783.981	208			

Table 21 (continued)

		<u>ANOVA</u>				
		Sum of Squares	df	Mean Square	F	Sig.
StudtoStudRel	Between Groups	32.429	3	10.810	1.459	.227
	Within Groups	1518.949	205	7.410		
	Total	1551.378	208			
StudFacRel	Between Groups	223.612	3	74.537	13.027	.000
	Within Groups	1172.943	205	5.722		
	Total	1396.555	208			
StudSelfEff	Between Groups	19.798	3	6.599	1.614	.187
	Within Groups	838.183	205	4.089		
	Total	857.981	208			
Motivation	Between Groups	18.778	3	6.259	1.824	.144
	Within Groups	703.643	205	3.432		
	Total	722.421	208			
Mentoring	Between Groups	129.609	3	43.203	10.850	.000
	Within Groups	816.266	205	3.982		
	Total	945.876	208			
StudIntegration	Between Groups	95.093	3	31.698	5.096	.002
	Within Groups	1275.127	205	6.220		
	Total	1370.220	208			
StudyHabits	Between Groups	92.720	3	30.907	4.417	.005
	Within Groups	1434.342	205	6.997		
	Total	1527.062	208			
TechUse	Between Groups	5.711	3	1.904	.324	.808
	Within Groups	1197.346	204	5.869		
	Total	1203.058	207			

A Post Hoc analysis was conducted to examine more specifically any significant differences between graduate schools. Table 22 shows that for Safety of the Learning Environment there were significant differences between the School of Education and the School of Arts and Sciences (Sig: .019) and between the School of Education and the School of Business (Sig: .009).

Table 22

*Post Hoc Multiple Comparisons*

Dependent Variable	(I) Q01: Graduate School	(J) Q01: Graduate School	Mean		Sig.	95% Confidence Interval	
			Difference (I-J)	Std. Error		Lower Bound	Upper Bound
SafetyintheEnviron	Arts and Science	Education	1.82614*	.62131	.019	.2168	3.4355
		Business	-.08036	.60511	.999	-1.6477	1.4870
		Social Work	.43170	.55064	.862	-.9946	1.8580
	Education	Arts and Science	-1.82614*	.62131	.019	-3.4355	-.2168
		Business	-1.90649*	.60134	.009	-3.4641	-.3489
		Social Work	-1.39443	.54650	.055	-2.8100	.0211
	Business	Arts and Science	.08036	.60511	.999	-1.4870	1.6477
		Education	1.90649*	.60134	.009	.3489	3.4641
		Social Work	.51206	.52801	.767	-.8556	1.8797
	Social Work	Arts and Science	-.43170	.55064	.862	-1.8580	.9946
		Education	1.39443	.54650	.055	-.0211	2.8100
		Business	-.51206	.52801	.767	-1.8797	.8556
StudtoStudRel	Arts and Science	Education	.55592	.59053	.783	-.9737	2.0855
		Business	-.28274	.57514	.961	-1.7725	1.2070
		Social Work	.65476	.52336	.595	-.7009	2.0104
	Education	Arts and Science	-.55592	.59053	.783	-2.0855	.9737
		Business	-.83866	.57156	.459	-2.3191	.6418
		Social Work	.09884	.51943	.998	-1.2466	1.4443
	Business	Arts and Science	.28274	.57514	.961	-1.2070	1.7725
		Education	.83866	.57156	.459	-.6418	2.3191
		Social Work	.93750	.50185	.245	-.3624	2.2374
	Social Work	Arts and Science	-.65476	.52336	.595	-2.0104	.7009
		Education	-.09884	.51943	.998	-1.4443	1.2466
		Business	-.93750	.50185	.245	-2.2374	.3624
StudFacRel	Arts and Science	Education	2.31451*	.51893	<b>.000</b>	.9703	3.6587
		Business	-.55952	.50540	.686	-1.8686	.7496
		Social Work	1.15539	.45991	.061	-.0359	2.3467
	Education	Arts and Science	-2.31451*	.51893	.000	-3.6587	-.9703
		Business	-2.87403*	.50226	<b>.000</b>	-4.1750	-1.5731
		Social Work	-1.15912	.45645	.057	-2.3414	.0232

Table 22 (continued)

Dependent Variable	(I) Q01: Graduate School	(J) Q01: Graduate School	Mean		Sig.	95% Confidence Interval	
			Difference (I-J)	Std. Error		Lower Bound	Upper Bound
StudSelfEff	Business	Arts and Science	.55952	.50540	.686	-.7496	1.8686
		Education	2.87403*	.50226	.000	1.5731	4.1750
		Social Work	1.71491*	.44101	.001	.5726	2.8572
	Social Work	Arts and Science	-1.15539	.45991	.061	-2.3467	.0359
		Education	1.15912	.45645	.057	-.0232	2.3414
		Business	-1.71491*	.44101	.001	-2.8572	-.5726
	Arts and Science	Education	.78959	.43868	.276	-.3467	1.9259
		Business	.13988	.42724	.988	-.9668	1.2465
		Social Work	.61028	.38878	.398	-.3967	1.6173
	Education	Arts and Science	-.78959	.43868	.276	-1.9259	.3467
		Business	-.64971	.42458	.421	-1.7495	.4500
		Social Work	-.17931	.38586	.967	-1.1788	.8201
Business	Arts and Science	-.13988	.42724	.988	-1.2465	.9668	
	Education	.64971	.42458	.421	-.4500	1.7495	
	Social Work	.47039	.37280	.588	-.4952	1.4360	
Social Work	Arts and Science	-.61028	.38878	.398	-1.6173	.3967	
	Education	.17931	.38586	.967	-.8201	1.1788	
	Business	-.47039	.37280	.588	-1.4360	.4952	
Motivation	Arts and Science	Education	.85105	.40193	.151	-.1900	1.8921
		Business	.76190	.39145	.212	-.2520	1.7758
		Social Work	.52945	.35621	.448	-.3932	1.4521
	Education	Arts and Science	-.85105	.40193	.151	-1.8921	.1900
		Business	-.08915	.38901	.996	-1.0968	.9185
		Social Work	-.32160	.35353	.800	-1.2373	.5941
	Business	Arts and Science	-.76190	.39145	.212	-1.7758	.2520
		Education	.08915	.38901	.996	-.9185	1.0968
		Social Work	-.23246	.34157	.904	-1.1172	.6523
	Social Work	Arts and Science	-.52945	.35621	.448	-1.4521	.3932
		Education	.32160	.35353	.800	-.5941	1.2373
		Business	.23246	.34157	.904	-.6523	1.1172

Table 22 (continued)

Dependent Variable	(I) Q01: Graduate School	(J) Q01: Graduate School	Mean		Sig.	95% Confidence Interval	
			Difference (I-J)	Std. Error		Lower Bound	Upper Bound
Mentoring	Arts and Science	Education	1.09801	.43290	.057	-.0233	2.2193
		Business	-1.28571*	.42161	<b>.014</b>	-2.3778	-.1936
		Social Work	-.11466	.38366	.991	-1.1084	.8791
	Education	Arts and Science	-1.09801	.43290	.057	-2.2193	.0233
		Business	-2.38372*	.41899	<b>.000</b>	-3.4690	-1.2984
		Social Work	-1.21267*	.38078	.009	-2.1990	-.2264
	Business	Arts and Science	1.28571*	.42161	<b>.014</b>	.1936	2.3778
		Education	2.38372*	.41899	<b>.000</b>	1.2984	3.4690
		Social Work	1.17105*	.36789	.009	.2181	2.1240
	Social Work	Arts and Science	.11466	.38366	.991	-.8791	1.1084
		Education	1.21267*	.38078	<b>.009</b>	.2264	2.1990
		Business	-1.17105*	.36789	.009	-2.1240	-.2181
StudIntegration	Arts and Science	Education	1.34496	.54107	.065	-.0565	2.7464
		Business	-.60417	.52696	.661	-1.9691	.7608
		Social Work	.57018	.47952	.634	-.6719	1.8122
	Education	Arts and Science	-1.34496	.54107	.065	-2.7464	.0565
		Business	-1.94913*	.52368	<b>.001</b>	-3.3056	-.5927
		Social Work	-.77479	.47592	.365	-2.0075	.4580
	Business	Arts and Science	.60417	.52696	.661	-.7608	1.9691
		Education	1.94913*	.52368	<b>.001</b>	.5927	3.3056
		Social Work	1.17434	.45982	.055	-.0167	2.3654
	Social Work	Arts and Science	-.57018	.47952	.634	-1.8122	.6719
		Education	.77479	.47592	.365	-.4580	2.0075
		Business	-1.17434	.45982	.055	-2.3654	.0167
StudyHabits	Arts and Science	Education	.83610	.57385	.465	-.6503	2.3225
		Business	-.90179	.55889	.373	-2.3494	.5459
		Social Work	.64975	.50858	.578	-.6676	1.9671
	Education	Arts and Science	-.83610	.57385	.465	-2.3225	.6503
		Business	-1.73789*	.55541	.011	-3.1765	-.2992
		Social Work	-.18635	.50476	.983	-1.4938	1.1211



Table 22 (continued)

Dependent Variable	(I) Q01: Graduate School	(J) Q01: Graduate School	Mean		Sig.	95% Confidence Interval	
			Difference (I-J)	Std. Error		Lower Bound	Upper Bound
TechUse	Business	Arts and Science	.90179	.55889	.373	-.5459	2.3494
		Education	1.73789*	.55541	<b>.011</b>	.2992	3.1765
		Social Work	1.55154*	.48768	<b>.009</b>	.2883	2.8147
	Social Work	Arts and Science	-.64975	.50858	.578	-1.9671	.6676
		Education	.18635	.50476	.983	-1.1211	1.4938
		Business	-1.55154*	.48768	<b>.009</b>	-2.8147	-.2883
	Arts and Science	Education	.38372	.52559	.885	-.9777	1.7452
		Business	.32979	.51442	.919	-1.0027	1.6623
		Social Work	.44737	.46581	.772	-.7592	1.6540
	Education	Arts and Science	-.38372	.52559	.885	-1.7452	.9777
		Business	-.05393	.51125	1.000	-1.3782	1.2704
		Social Work	.06365	.46230	.999	-1.1339	1.2612
	Business	Arts and Science	-.32979	.51442	.919	-1.6623	1.0027
		Education	.05393	.51125	1.000	-1.2704	1.3782
		Social Work	.11758	.44956	.994	-1.0469	1.2821
Social Work	Arts and Science	-.44737	.46581	.772	-1.6540	.7592	
	Education	-.06365	.46230	.999	-1.2612	1.1339	
	Business	-.11758	.44956	.994	-1.2821	1.0469	

\*. The mean difference is significant at the 0.05 level.

In the area of Student-Faculty Relationships, there was a significant differences between School of Education and School of Arts and Sciences (Sig: .000), School of Education and School of Business (Sig: .000), and between the School of Social Work and the School of Business (Sig: .001). Faculty mentoring was also indicated in Table 22, as there were significant differences between the School of Education and the School of Business (Sig: .000) and between School of Education and the School of Social Work (Sig: .009). There were also significant differences between the School of Business and

the School of Social Work (Sig: .009), and between the School of Arts and Sciences and the School of Business (Sig: .014).

For Student Integration, the only significant difference was between the School of Education and the School of Business (Sig: .001). With respect to Student Study Habits, significant differences lay between the School of Education and the School of Business (Sig: .011) and between the School of Business and the School of Social Work (Sig: .009). There were no significant differences among the schools on the other independent variables.

The following subset tables show that in every case of significant difference, the mean score for the School of Education was lower than the mean scores for the other schools. This implies that the graduate students in the School of Education responded with higher levels of safety in the learning environment, higher levels of graduate student faculty relationships, higher levels of graduate student faculty mentoring, higher levels of graduate student integration, and higher levels of graduate student study habits than graduate students in the School of Social Work, School of Business, and School of Arts and Sciences.

In Table 23, the School of Education and Social Work in the first column indicates that there is no significant difference between the two departments in the area of safety in the learning environment. The significance recorded was .077, which was above the .05 level of acceptability. The school of Social Work, Arts and Sciences, and Business are in column two, which indicated that there is no significant difference among the three schools.

Table 23

*Tukey HSD Safety in the Learning Environment*

Tukey HSD <sup>ab</sup>		Subset for alpha = 0.05	
Q01: Graduate School	N	1	2
Education	43	7.6977	
Social Work	76	9.0921	9.0921
Arts and Science	42		9.5238
Business	48		9.6042
Sig.		.077	.811

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 49.348.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The significance between the three schools at the end of column recorded .811, which indicates that the school of Social Work, Arts and Science, and school of Business were almost at the same level in the mean scores. The mean scores for those ranged from 9.0 to 9.6. The range of mean scores indicate that the school of Education was left out of that column therefore, indicating a significant difference between the school of Education and the other three schools of Social Work, Arts and Science, and the school of Business in the area of safety in the learning environment. The data from Table 23 support the findings in the main Tukey Table.

In the next table, graduate student-faculty relationships, the school of Education, and Social Work in the first column indicate that there is no significant difference

between the two departments Table 24). The significance recorded was .079, which was above the .05 level of acceptability.

Table 24

*Tukey HSD Student-Faculty Relationships*

Tukey HSD <sup>ab</sup>		Subset for alpha = 0.05		
Q01: Graduate School	N	1	2	3
Education	43	7.2093		
Social Work	76	8.3684	8.3684	
Arts and Science	42		9.5238	9.5238
Business	48			10.0833
Sig.		.079	.080	.652

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 49.348.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The School of Social Work and the School of Arts and Science are in column two, which indicated that there was no significant difference among the two schools. The significance recorded was .080, which was above the .05 level of acceptability. The School of Social Work and the school of Arts and Science are in column three, which indicated that there is no significant difference among the School of Arts and Sciences and the School of Business. The significance recorded was .652, which was above the .05 level of acceptability. The mean scores for the Schools of Education and Social Work, Social Work and Arts and Science, and the Schools of Arts and Sciences and Business ranged from 7.2 to 8.3, 8.3 to 9.5, and 9.5 and 10.0, respectively. The range of

mean scores indicates that the School of Education and Social Work were significantly different from the Schools of Business and Arts and Science and the Schools of Education and Business were also significantly different from the Schools of Social Work and Arts and Science in the area of graduate student to faculty relationships. The data from Table 24 support the findings in the main Tukey Table.

In Table 25, graduate student mentoring, the School of Arts and Sciences and Social Work in the second column indicates that there is no significant difference between the two departments. The significance recorded was .992, which was above the .05 level of acceptability. The mean scores for the school of Social Work and Arts and Science was 6.21 to 6.31. The range of mean scores indicates that the Schools of Education and Business were significantly different from the School of Arts and Sciences and the School of Social Work in the area of graduate student mentoring. The data from Table 25 support the findings in the main Tukey Table.

Table 25

*Tukey HSD Mentoring*

Tukey HSD <sup>ab</sup>		Subset for alpha = 0.05		
Q01: Graduate School	N	1	2	3
Education	43	5.1163		
Arts and Science	42		6.2143	
Social Work	76		6.3289	
Business	48			7.5000
Sig.		1.000	.992	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49.348.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

In Table 26, graduate student integration, the school of Education and Social Work on the first column indicates that there is no significant difference between the two departments. The significance recorded was .414, which was above the .05 level of acceptability. The school of Social Work, Arts and Sciences, and Business are in column two, which indicated that there is no significant difference among the three schools. The significance between the three schools at the end of column recorded .093, which indicates that the school of Social Work, Arts and Science, and school of Business were almost at the same level in the mean scores.

Table 26

*Tukey HSD Student Integration*

Tukey HSD <sup>a,b</sup>		Subset for alpha = 0.05	
		1	2
Q01: Graduate School			
Education	43	8.4884	
Social Work	76	9.2632	9.2632
Arts and Science	42		9.8333
Business	48		10.4375
Sig.		.414	.093

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49.348.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The mean scores for those ranged from 9.2 to 10.4. The range of mean scores indicate that the school of Education was left out of that column, therefore, indicating a significant difference between the school of Education and the other three schools of Social Work, Arts and Science, and the school of Business in the area of graduate student integration. This data from Table 26 support the findings in the main Tukey Table.

In Table 27, graduate student study habits, the school of Education, Social Work, and Arts and Sciences on the first column indicates that there is no significant difference between the three departments. The significance recorded was .398, which was above the .05 level of acceptability. The school of Arts and Sciences, and Business are in column two recorded a significance of .330, which indicated that there is no significant difference among the two schools. The mean scores for the school of Education, Social Work, and Arts and Sciences ranged from 7.1 to 7.9. The range of mean scores indicate that the school of Education, Social Work, and Arts and Sciences were similar in regards to graduate student study habits, yet the school of Business had a mean score of 8.8 indicating a significant difference from the other three schools. This data from Table 27 support the findings in the main Tukey Table.

Table 27

*Tukey HSD Study Habits*

Tukey HSD <sup>a,b</sup>		Subset for alpha = 0.05	
Q01: Graduate School	N	1	2
Education	43	7.1163	
Social Work	76	7.3026	
Arts and Science	42	7.9524	7.9524
Business	48		8.8542
Sig.		.398	.330

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49.348.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## **Qualitative Phase**

### **Analysis of Focus Groups**

Qualitative research methods were used to help the researcher examine the relationship between factors of graduate student engagement and academic achievement. Qualitative data was collected from eight interviews and four focus groups towards the end of the fall 2016 semester. The analysis required the researcher to code the data into categories and themes which provided a more in-depth analysis of the relationship between factors of graduate student engagement and academic achievement. The researcher also assessed and evaluated the collected data. Graduate students were spoken to by the researcher prior to the start of a scheduled class and asked to participate in the interviews and focus groups. The interviews and focus groups were conducted inside classrooms in each the respective department in order to examine from the students' perspective the relationship between factors of graduate student engagement and academic achievement.

### **The Participants**

The qualitative phase was designed to examine the experiences of participants.

This section was designed to answer the following questions:

- RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?
- RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?



- RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?
- RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?
- RQ5. Is there a significant relationship between graduate students' motivation and academic achievement?
- RQ6. How does graduate student faculty mentoring influence academic achievement?
- RQ7. How does graduate student integration influence academic achievement?
- RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?

A total of 16 graduate students participated in the focus groups sessions. Of the 16 participants, 3 African-American females participated from the School of Education, 3 African-American females and 1 African-American male graduate student participated from the School of Business, 3 African-American females participated from the School of Social Work, and 4 African-American females and 2 African-American males participated from the School of Arts and Science (Political Science) (see Table 28). Focus group participants were selected based on graduate student availability and wiliness. A total of 16 participants were within the four focus group sessions. The first focus group session included three graduate students from the school of Education.

Table 28

*Focus Group Demographics*

<b>Participant</b>	<b>Graduate School Enrolled</b>	<b>Ethnicity</b>	<b>Gender</b>
EDFG1	Education	African American	Female
EDFG2	Education	African American	Female
EDFG3	Education	African American	Female
BUSFG1	Business	African American	Male
BUSFG2	Business	African American	Female
BUSFG3	Business	African American	Female
BUSFG4	Business	African American	Female
SSWFG1	Social Work	African American	Female
SSWFG2	Social Work	African American	Female
SSWFG3	Social Work	African American	Female
SASPSFG1	Political Science	African American	Male
SASPSFG2	Political Science	African American	Male
SASPSFG3	Political Science	African American	Female
SASPSFG4	Political Science	African American	Female
SASPSFG5	Political Science	African American	Female
SASPSFG6	Political Science	African American	Female

Focus group session 2 had four graduate students from the school of Business. Session 3 had three graduate students from the school of Social Work, and focus group session 4 had six graduate students from the school of Arts and Science. The participants from the School of Education were from the Counseling Department and the graduate

student participants from the school of Arts and Science were all from the Political Science Department.

The researcher began the focus groups by asking the graduate students to read and sign the informed consent form. Graduate students were then given the opportunity to participate, yet were informed that participants could opt out any time before, during, or after the focus group began. Participants were also informed of focus group confidentiality and that a code would be used to identify each participant.

The interactions with the participants in the focus groups were recorded and transcribed within one week after the observation. The focus group presented a structured format with predetermined open-ended questions. Additional questions were often asked to increase the researcher's clarification as needed. The following questions were verbally posed to each graduate student that attended the focus group sessions. All research questions were initiated; however, the researcher focused on questions two, five, and six.

1. How would you describe the physical safety of the campus environment at night?
2. How would you describe interactions with other graduate students when working on academic assignments?
3. What are the pros and cons of feeling confident about completing academic work?
4. What factors motivate graduate students to achieve academically?
5. How do faculty mentoring relationships affect academic success?

6. Explain your level of engagement and interactions with other graduate students?
7. What factors influence your academic study habits?
8. How are the Interactive White Boards (IWB) used in your program?
9. Is there anything else you would like to discuss about engagement and/or academic achievement?

### **Focus Group Research Question Results**

RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?

The research examined if there was a significant relationship between graduate student-to-student relationships and academic achievement. Nearly 89% of the respondents agreed that there was a significant relationship between graduate student to graduate student relationships and academic achievement. Graduate students reported that they work well together and stick with students that they trust academically: “I just tend to work together with people that I trust academically” (EDFGA, personal communication, April 20, 2016). Participant EDFGA said, “They were all on the same path . . . going in the same direction . . . so, I think that has been real beneficial” (personal communication, April 20, 2016). Respondent SSWFGA said graduate student-to-graduate student relationships “are positive interaction, especially when you already built a rapport” (personal communication, April 18, 2016). Graduate student BUSFGD said, “Since I get A’s on everything I am going to help another person get an A” (personal communication, April 20, 2016). The vast majority of respondents (94%) felt positive

interactions with other graduate students when working on academic assignments. Yet, 1 of 16 respondents said it was hard mixing with other people. The interactions with the group and the relationship between academic achievements lead student SASPSFGC to say, “Interactions in my department are really good at creating an intellectual discourse which is the major benefit” (personal communication, April 19, 2016).

RQ6. How does graduate student faculty mentoring influence academic achievement?

Nearly 82% or 13 of the 16 respondents agreed that graduate student faculty mentoring relationships positively influence academic achievement. Participant SSWFGC reported that it is easier to create “those type of relationship at the graduate level . . . it enables student to just walk up to them and ask about assignments” (personal communication, April 18, 2016); 7 of 16 graduate students (43%) also reported that mentoring relationship are easy to form when the faculty member cares: “It’s easier to kind of form those relationships . . . especially when you know that they care” (Participant EDFGC, personal communication, April 20, 2016); 3 of 16 graduate students (18%) felt like mentoring relationships help graduates students value their education. Student EDFGB stated, “Even though I want to give up, I don’t want to give up because they’ll be disappointed, they actually care, so I think that does help you academically” (personal communication, April 20, 2016). Another student said, “Academically mentors coach me through” (Participant BUSFGB, personal communication, April 20, 2016). Nearly 38% of the respondents reported the faculty mentoring relationship influence other areas that indirectly influence academics achievement. “Mentors help you analyze

and set goals for personal and business life” (Participant BUSFGD, personal communication, April 20, 2016). Another said, “My mentor encourages and supports me” (Participant BUSFGB, personal communication, April 20, 2016). Graduate student SSWFGA said, “my mentor reminds me and pushes me . . . my mentor helps me to think outside the box and strive for higher both personally and academically” (personal communication, April 18, 2016). The positive influences of faculty mentoring relationship on academic achievement were mentioned as 37.5% of the respondents agreed that mentoring was necessary, very helpful, and extremely beneficial. Mentors guide students and help make the process easier. One outlier stated, “Mentors guide students in every direction. You are on your own direction but they do help to somewhat guide you” (Participant SASPSFGF, personal communication, April 19, 2016). Another student attributed the near completion of the program to the faculty mentoring relationship and stated, “Having a mentor definitely helps you . . . I would not have been able to go through the process without having that relationship” (Participant BUSFGD, personal communication, April 20, 2016).

RQ7: How does graduate students’ integration influence academic achievement?

The researcher also used the data from the focus groups to examine how graduate students’ integration influenced academic achievement. The majority of graduate students (88%) felt like graduate students’ integration took place within departments among graduate students that started the program at the same time. Many of the respondents (69%) felt like graduate students’ integration within the department positively influenced academic achievement. Nearly 19% of the respondents agreed that

low to minimal levels of graduate students' integration were due to time constraints of personal and professional responsibilities. The majority (67%) of the respondents also felt like faculty member feedback was an important aspect of graduate students' integration. One student stated that "integration provides great support in regards to group efforts" (Participant, SSWFGA, personal communication, April 18, 2016).

### **Analysis of Interview Research**

Eight interview respondents agreed to participate in the interviews. Two graduate students from each school were interviewed. Of the 8 interviewees, 7 identified as African American female and 1 was identified as an African-American male graduate students; 5 participants identified as attending their first graduate program, and 4 identified as not attending their first graduate program; 5 participants were identified as the first family member to attend college, and 4 identified as not the first in the family to attend college. Of the 8 participants, 6 participants identified as not being the first family member to graduate from college, and two identified as the first family members to graduate from college; 3 participants identified as first-year graduate students, two participants identified as fifth-year graduate students, one participants identified as second-year graduate students, one participants identified as a third-year graduate student, and 1 participant identified as a fourth-year graduate student. Of the 8 participants, one participant identified as having a 4.0 GPA, two participants identified as having a 3.4 GPA; one participant identified as having a 3.7 GPA, one participant each identified as having a 3.5 GPA, 3.2 GPA, and 3.0 GPA, respectively; 7 of the 8

participants identified with not taking time away from attending classes since starting the program; and 7 of 8 of the participants identified as receiving financial aid (see Table 29).

Table 29

*Graduate Student Interview Demographics*

Participant	School	1 <sup>st</sup> Graduate Program	1 <sup>st</sup> Family		Current Year of Graduate School	Grade Point Average (GPA)
			Member to Attend College	Member to Graduate College		
ED1	Education	No	No	No	2 <sup>nd</sup> Year	3.7
ED2	Education	No	No	No	4 <sup>th</sup> Year	4.0
BUS1	Business	Yes	No	No	1 <sup>st</sup> Year	3.4
BUS2	Business	Yes	Yes	Yes	1 <sup>st</sup> Year	3.2
SSW1	Social Work	Yes	Yes	Yes	5 <sup>th</sup> Year	3.5
SSW2	Social Work	Yes	No	No	1 <sup>st</sup> Year	3.0
SAS1	Arts & Sciences	Yes	No	No	3 <sup>rd</sup> Year	3.4
SAS2	Arts & Sciences	No	No	No	5 <sup>th</sup> Year	4.0

Participant	School	Time Off or Away Since Starting Current Program		Financial Aid	
			Race	Recipient	Sex
ED1	Education	No	African American	Yes	Female
ED2	Education	No	African American	Yes	Male
BUS1	Business	No	African American	No	Female
BUS2	Business	No	African American	Yes	Female
SSW1	Social Work	No	African American	Yes	Female
SSW2	Social Work	Yes	African American	Yes	Female
SAS1	Arts & Sciences	No	African American	Yes	Female
SAS2	Arts & Sciences	No	African American	Yes	Female

The interview questions (IQ) provided data to answer research questions 1- 8.

The focus group questions on graduate student-to-student relationships, graduate student mentoring, and graduate student integration provided additional information to answer



research questions 2, 6, and 7. There were 37 interview questions (IQ) used for the research:

- IQ1: Which graduate school do you currently attend?
- IQ2: Is this the first graduate program you have attended?
- IQ3: Are you the first person in your family to attend college?
- IQ4: Are you the first person in your family to graduate from college?
- IQ5: What year of graduate school are you currently attending?
- IQ6: What is your Grade Point Average?
- IQ7: Have you taken any time off since starting your current graduate program?
- IQ8: How would you classify yourself based on race?
- IQ9: Do you receive financial aid assistance for your current program?
- IQ10: What is your sex?
- IQ11: How do students feel about taking classes on the campus at night?
- IQ12: How safe are students when walking to their cars at night after class?
- IQ13: Is the university campus adequately policed?
- IQ14: How enjoyable is it working in groups with other students?
- IQ15: What is your personal view on student interacts for nonacademic reasons outside the classroom?
- IQ16: What are your thoughts as students reviewing and sharing study materials?
- IQ17: How comfortable are students commenting and being critical of faculty statements during lectures?

- IQ18: How comfortable are students communicating with faculty members outside the classroom?
- IQ19: What are your ideas on the freedom of students contacting faculty members about academic issues by phone?
- IQ20: How confident are students in their ability to participate in lectures?
- IQ21: What are student beliefs in their ability to have success with class assignments?
- IQ22: What is the confidence level of students in their ability to graduate from your program?
- IQ23: Are graduate students motivated to perform academically by internal or external forces?
- IQ24: What motivates most graduate students?
- IQ25: Are internal or external forces greater motivational drivers for graduate students?
- IQ26: How do graduate students identify faculty members as possible mentors?
- IQ27: How do students feel about faculty members providing guidance and support?
- IQ28: How do students with mentoring relationships perform academically?
- IQ29: What are the shared attitudes towards the academic work of other graduate students?
- IQ30: How often do students express shared beliefs about how the institution should operate?

- IQ31: How does the University's Student Affairs Department help in building campus spirit among graduate students?
- IQ32: How focused are graduate students when it comes to completing assignments?
- IQ33: What is the academic behavior level among graduate students in your program?
- IQ34: What are the students' attitudes when it comes to graduating on time?
- IQ35: How frequently do faculty members use the Interactive White Board (IWB)?
- IQ36: How do the Interactive White Boards (IWBs) enhance learning among students?
- IQ37: Which of the functions of the Interactive White Board (IWB) are used most often?

### **Data Analysis**

Coding was completed to help the researcher easily identify the graduate student interviewees when referring back to the transcripts of the recorded interviews. The graduate student interviewees were labeled by initials along with a number. For example, ED1 and ED2 were the labels used for the first and second graduate students' interviewed from the School of Education. The remaining labels SSW1 and SSW2, BUS1 and BUS2, SAS1 and SAS2 were all used for the first and second interviewees from the School of Social Work, School of Business, and the School of Arts and Sciences, respectively.

The data from the interviews and focus groups were collected and transcribed. The researcher intent for collecting, analyzing, or organizing themes for the qualitative data was to examine the relationship between factors of graduate student engagement and academic achievement. The interviews and focus group discussions were guided by predetermined questions located in Appendices B and C. The results are discussed after each related research questions is restated.

Once all the data from the interviews were collected, the researcher organized the data into themes in order to validate the information in the study. The researcher then identified twenty-four themes that were grouped them into eight categories. The first category, Learning Environment, included the following three themes: Safety Taking Night Classes, Safety Walking to Cars, and Campus Police Presence. The second category, Student Relationships, included three themes, Interactions in the Classroom, Working in Groups, and Study Materials. The third category, Student Faculty Relationships included the following three themes: Interactions during Lecture, Interactions outside the Classroom, and Interactions by Phone. The fourth category, Self-Efficacy included the following themes: Confidence Participating, Confidence Level with Assignments, and Confidence in their Ability to Graduate. The fifth category, Motivation included the following themes: Source of Motivation, Greatest Motivational Drivers, and Faculty Members as Motivators. The sixth category, Faculty Mentoring included the following themes: Available Mentors, Guidance and Support, and Mentees Academic Performance. The seventh category, Integration included the following themes: Challenging Academic Work, Shared Beliefs, and the University do not Build

Campus Spirit. The eighth category, Study Habits included the following themes:

Focused Graduate Students, Behavior Levels, and Determined Graduate Students. Each data source presented some similarities and differences with regards to the related themes. Table 30 outlines the codes, themes, and definitions identified by the researcher.

Table 30

*Coding Themes Analysis Matrix*

Category	Learning Environment			Graduate Student-to-student Relationships		
	Safety in Night Classes	Safety Walking to Cars	Campus Police Presence	Interactions outside the Classroom	Working in Groups	Study Materials
Themes	IDC1	IDC2	IDC3	IDC4	IDC5	IDC6
Data Codes						
Number of time each theme emerged	5	6	4	8	6	5
Total Interview	8	8	8	8	8	8
Total Emerge from Theme			<b>15</b>			<b>19</b>
Category	Graduate Student to Faculty Relationships			Graduate Student Self-Efficacy		
	Interactions during Lecture	Interactions outside the Classroom	Interactions by Phone	Confidence Participating	Confidence with Assignments	Confidence Graduating
Themes	IDC7	IDC8	IDC9	IDC10	IDC11	IDC12
Data Codes						
Number of time each theme emerged	6	8	5	7	7	7
Total Interview	8	8	8	8	8	8
Total Emerge from Theme			<b>19</b>			<b>21</b>

Table 30 (continued)

Category	Graduate Student Motivation			Graduate Student Faculty Mentoring		
	Motivated by both internal and external factors	Greatest motivational factor	Faculty Members as Motivators	Seeking Available Mentors	Guidance and Support	Mentees Academic Achievement
Themes	IDC13	IDC14	IDC15	IDC16	IDC17	IDC18
Data Codes						
Number of time each theme emerged	6	4	4	3	4	5
Total Interviews	8	8	8	8	8	8
Total Emerge from Theme			<b>14</b>			<b>12</b>
Category	Graduate Student Integration			Graduate Student Study Habits		
Themes	Challenging Academic Work	Shared Beliefs	University do not Build Campus Spirit	Focus	Behavior Levels	Determination
Data Codes	IDC19	IDC20	IDC21	IDC2	IDC23	IDC24
Number of time each theme emerged	2	8	6	7	7	5
Total Interview	8	8	8	8	8	8
Total Emerge from Theme			<b>16</b>			<b>19</b>

The researcher conducted an analysis by interpreting the statements from the interviews into codes, categories, and themes. The qualitative data were used to create an Analysis Matrix organized with the 18 categories, 24 themes, and 24 data codes.

Data based on the number of times each theme emerged were aggregated by theme, total number of times each theme emerged from the interview data, total number of time each theme emerged from each category, and the total number of times each theme emerged overall. The categories, themes, data codes, and data were analyzed and the results are in Appendix I.

According to the analysis matrix, 24 themes emerged from the interview protocol. Themes in the category of graduate student self-efficacy emerged 21 times as most frequently. There was equal distribution between graduate students' high confidence level participating, completing assignments and graduating the program.

The second highest frequency of themes emerged 19 times from the three themes of graduate student-to-student relationships, graduate student to faculty relationship, and graduate student study habits. The category of graduate student-to-student relationships indicated 8 times that graduate students interact outside of the classroom for non-academic reasons, six times that graduate students enjoy working in groups, and five times that graduate students think it is good to share materials. Interactions outside the classroom with faculty members emerged eight times, interactions during the lecture emerged six times, and interaction with faculty members via the telephone emerged 5 times in the category of graduate student to faculty relationships. The theme of graduate student study habits emerged seven times when students had high levels of focus and discipline and five times where graduate student had high levels of determination.

The third highest frequency of themes emerged 16 times from the graduate student integration themes, where graduate student integration emerged 8 times when

students shared common beliefs, 6 times where the University Student Affairs department did not help build campus spirit, and only two times where graduate student agreed on the challenges of academic work.

The fourth highest frequency of themes emerged 15 times from the safety attending night classes' category. Graduate student feeling safe while walking to the car after class was emerged eight times, five times graduate student reported feeling safe attending night classes, and 4 times did the respondents report that the campus was adequately policed. The second lowest frequency emerged 14 times from the graduate student motivation category. Graduate student motivated by internal and external factors emerged six times, external factors as the greatest motivational factors was emerged four times, and faculty members as the greatest motivational factors were emerged four times. The category of graduate student mentoring emerged only 12 responses, which was the lowest frequency of response. Graduate students feeling good about faculty members providing guidance and support emerged four times, graduate students performing better academically emerged four times, and graduate students seeking mentors that were available emerged three times.

### **Analysis of the Interviews**

Responses to the interview questions provided answers to the first eight research questions. The interview participants included two graduate students from each school: School of Education, School of Social Work, School of Business, and School of Arts and Sciences. The interview responses are stated after each corresponding research question is listed.



### **Safety in the Learning Environment and Academic Achievement**

RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?

Graduate students from the School of Education, School of Social Work, School of Business, and School of Arts and Sciences were asked interview questions about safety in the learning environment. According to responses from interviews, graduate students felt varying degrees of safety in the learning environment. Respondents replied to questions about the adequacy of the campus police presence, feelings of safe taking night classes, and safety walking to their cars after night classes. A higher response rate of 88% indicated that respondents felt safe walking to their cars at night after class. Conversely, only 12% of the respondents interviewed did not feel safe walking to their cars at night after class. Nearly 63% of the respondents replied that graduate students felt safe while attending night classes. Overall, graduate students felt there was a significant relationship between safety in the learning environment and academic achievement. Approximately 75% of the respondents interviewed felt like the campus was adequately policed. Some degrees of vulnerability were overcome as 28% of the in-class safe respondents (63%) mitigated the out of class issue based on increased campus security measures, calling the police department for a pickup, and walking in groups to their cars. Only 8% of the respondents were not sure about their feeling about physical safety in the learning environment.

### **Graduate Student to Graduate Student Relationships and Academic Achievement**

RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?

The results indicated that a significant relationship exists between graduate student to graduate student relationships and academic achievement. Results indicated that 75% of the respondents enjoyed working in groups with other graduate students, yet only 12.5% felt like working in groups was annoying, and the remaining 12.5% of respondents did not work in groups at all. According to other interview questions, 75% of the respondents felt like it was a good or great idea for graduate students to interacting outside the classroom for nonacademic reasons, while 12.5% did not interact outside the classroom. The remaining respondent felt like she really did not have interactions outside the classroom. Generally (62.5%), respondents felt good about students reviewing study materials, 25% of respondents did not share study materials with other graduate students, and one respondent. Respondent BUS2 stated, “sharing does not take place but she is open to the idea which can increase her personal knowledge” (personal communication, March 5, 2016). Overall, a statistical significant relationship existed between graduate student to graduate student relationships and academic achievement.

### **Graduate Student to Faculty Relationships and Academic Achievement**

RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?

According to the interview responses, there was a significant relationship existed between graduate student to faculty relationships and academic achievement. Most of the

graduate students (88%) felt comfortable or very comfortable communicating with the faculty member outside of the classroom. Generally, three-quarters or 75% of respondents felt comfortable or very comfortable interacting with the faculty members during the lecture. The other 25% of respondents did not feel comfortable interacting during the lecture. One respondent felt even more comfortable communication with faculty members outside of the classroom. Respondents also felt free or very free contacting faculty members by phone as 88% of the respondents indicated. One student felt like the freedom to interact with faculty members using the phone was based on the students' relationship with the faculty member. Another respondent felt like interactions with faculty members by phone provided convenience for graduate students.

### **Graduate Student Self-Efficacy and Academic Achievement**

RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?

The finding indicated that there was a significant relationship between graduate student self-efficacy and academic achievement. According to the eight interview responses, 100% of the respondents were confident in their ability to participate in the classroom lectures. Success with reading assignments and understanding materials were factors that 25% of the graduate students felt gave graduate students' confidence. The majority of graduate students interviewed (88%, 7 interview respondents) believed in the student's ability to be successful in the program. The confidence level of 25% of the respondents was attributed the faculty members. One respondent attributed confidence issues to pedagogy, while SAS1 stated that, "Faculty members will take time to review

details, answer questions, and even stay after class for a conversation” (personal communication, April 18, 2016). Generally, confidence in the respondent’s ability to graduate from the program was 87.5%, while only 12.5% of the respondents were not too confident in their ability to graduate from the program.

### **Graduate Student Motivation and Academic Achievement**

RQ5. Is there a significant relationship between graduate students’ motivation and academic achievement?

The results indicated that there was a significant relationship between graduate students’ motivation and academic achievement. Most graduate students (75%) felt by both internal and external factors motivated the students to achieve academically. One respondent replied that motivation derived from only internal factors and one graduate student responded that motivation derived from only external factors. Nearly 75% of the participants felt like external factors were greater motivational drivers than internal factors such as increased income and faculty members.

### **Graduate Student Mentoring and Academic Achievement**

RQ6. How does graduate students’ faculty mentoring influence academic achievement?

Graduate students were seeking faculty mentors as nearly 38% of respondents were looking for available faculty mentors. Faculty mentors that were experienced, understanding, flexible, and encouraging were also sought after by 38% of the respondents. More than 23% of the respondents felt like faculty mentors should be persons that are similar to the graduate student, has an open minded, and will to challenge

the student. Graduate student guidance and support was fair as 50% of the respondents felt that faculty members provided great guidance and support, while 37.5% of respondents felt that faculty guidance and support is lacking, and 12.5% felt like faculty guidance and support is greatly needed. Generally, graduate students with faculty mentoring relationships perform better. Overall, graduate student felt that faculty mentoring influenced academic achievement. Greater than 62% of the respondents felt like graduate students with faculty mentors perform better academically. Nearly, 13% of the respondents felt unsure about the academic performance of graduate student with mentors and another 12.5% felt that the academic achievement of graduate student with mentors depends on the student. BUS2 stated, "Sometimes students don't need a mentor to get a high GPA" (personal communication, April 17, 2016).

### **Graduate Student Integration and Academic Achievement**

RQ7. How does graduate students' integration influence academic achievement?

Academic work as challenging was the feeling of 25% of the responded, yet another 25% of the respondents agreed that some of the academic work was busy work.

BUS2 stated attitudes are not good. SAS1 said:

We don't have many options, get it done, not really Inundated with a whole bunch of work, we all understood that it's a graduate program not simple assignments to read and answer three questions. We have to give extensive and critical analysis of the assignments, so we did not have too many complaints of that; we understood what the program required. (Personal communication, April 18, 2016)

According to the eight interview responses, 100% of the respondents felt that graduate students express shared beliefs often or very often concerning issues the impact the students, but graduate students' integration did not influence academic achievement. Nearly 63% of the respondents felt that the University Student Affairs department does not help build campus spirit. Approximately 25% of the respondents felt like the University only used the Student Graduate Association (SGA) and the Educational Leadership Student Association (ELSA) when attempts were made to build campus spirit. SSW stated, "We talk about the lack of being informed, we are the last to know everything, and we always receive information late" (personal communication, April, 16, 2016). One respondent was not sure about the University's Student Affairs Department helping building campus spirit among graduate students and could not comment on such influence upon academic achievement.

### **Graduate Student Study Habits and Academic Achievement**

RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?

Generally, graduate students were focused academically as 88% of the respondents felt like graduate students were mainly focused on completing assignments. The majority of respondents (82%) felt like there was a significant relationship between graduate students' study habits and academic achievement. One respondent felt like Canvas, the Content Management System (CMS) helped respondents' focus by providing reminders to complete assignments. ED2 stated, "Graduate students are very focused because they spend a lot of money, know what it takes, and are going to do what it takes

to achieve academically” (personal communication, April 14, 2016). Generally, graduate students (63%) felt like the ability to focus was one of the most important study habits.

The majority of graduate students (88%) also included high disciplined behavior levels as an important study habit. SSW2 from the school of Social Work felt that being put out of the program keeps academic behavior high. SSW2 stated,

We know that we cannot get above A, everyone is pretty on top of their game making sure that they are able to get an A or better, I mean B or better.

Everybody aims for A because you can only get 2 C’s the entire program. The lack of disciplined behavior itself can get put out the program if you get 2 C’s.

That kind of keeps us in check. (Personal communication April 16, 2016)

Only one respondent felt like graduate students had low academic discipline levels in terms of graduate student behaviors. SAS1 stated,

Graduate students need to get it done and keep it moving, while some have to be reminded that graduate students are not in a race. Graduate students do need to get done because the longer you wait and draw out the process the more financial aid must be applied for. At the graduate level you don’t want to keep doing that, you want to get it right and not have to retake anything. (Personal communication April 18, 2016)

Nearly 63%, of the respondents felt like graduate student needed a determined attitude in order to graduate on time. One respondent felt like it was aggravating the way

things were setup and impossible to graduate on time. Half of the graduate students (50%) also felt like external pressures of graduate school influenced study habits.

### **Summary**

The quantitative data collected in this research study was analyzed by this researcher using the Statistical Package for the Social Sciences (SPSS) software. A Pearson correlation analysis was used to test the significance of the relationship between the dependent variable, academic achievement, and the independent variables: (a) safety in the learning environment, (b) graduate student to graduate student relationships, (c) graduate student to instructor relationships, (d) self-efficacy, (e) graduate student motivation, (f) graduate student faculty mentoring, (g) graduate student integration, (h) graduate student use of technology, and (i) graduate student study habits.

The first 10 questions on the survey captured demographic data about the participants in terms of gender, school attending, college experience, grade point average, race and sex. The next section of the survey instrument collected responses based on the independent variables safety in the learning environment, graduate student to graduate student relationships, graduate student to faculty relationships, self-efficacy, graduate student motivation, graduate student mentoring, graduate student integration, graduate student use of technology, and graduate student study habits. This researcher used Pearson's Correlations to analyze quantitative research question one related to safety in the learning environment, research question two related to graduate to graduate student relationships, research question three related to graduate student to faculty relationships, research question four related to graduate student self-efficacy, research question five



related to graduate student motivation, research question eight related to graduate student study habits, research question nine related to graduate student use of technology, research question ten related to greatest impact of the independent variable, and research question eleven related to the difference between independent variables based on different school enrollments of graduate students.

The researcher analyzed research question 1-5 and 8-11 quantitatively, research questions 1-5 and 8 were analyzed both quantitatively and qualitatively, and research questions 5-6 were analyzed qualitatively only. The qualitative data collected in this research study was analyzed by this researcher using coding the data. To collect the qualitative data, the researcher recorded eight interviews which comprised of two graduate students each school to include the School of Education, School of Social Work, School of Business, and School of Arts and Sciences. To analyze the qualitative data, this researcher coded the transcripts and identified common themes. This researcher collected additional qualitative data by completing four focus group sessions with graduate students from the School of Education (3), School of Social Work (3), School of Business (4), and School of Arts and Sciences (6). To analyze the set of qualitative data, the researcher coded the responses and identified common themes. Twenty-four themes emerged from the analysis and were categorized into eight areas, Learning Environment, Graduate Student-to-Student Relationships, Graduate Student-to-Faculty Relationships, Graduate Student Self-Efficacy, Graduate Student Motivation, Graduate Student Faculty Mentoring, Graduate Student Integration, and Graduate Study Habits. Survey questions were used to answer specific research questions; interview responses were used to help

answer research questions 1, 2, 3, 4, 5, and 7. Focus group responses were also used to help answer research questions 2, 6, and 7.

CHAPTER VI  
FINDINGS, IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

**Introduction**

The purpose of the study was to examine the relationship between factors of graduate student engagement and academic achievement at a historically black college and university (HBCU). The research study used a mixed-method which included both quantitative and qualitative data. The quantitative section utilized correlational research as a survey was used to determine the extent of the relationship between the factors of engagement and academic achievement. The qualitative section used a phenomenological approach. Interview and focus group analyses helped to determine the participants' meanings and perceptions about the issues. Kwok (2012) held that the mixed method is a combination of both quantitative and qualitative approaches. The researcher selected the mixed method because the processes provide a good opportunity to answer the research questions (Kwok, 2012,). The independent variables as factors of student engagement to include: (a) safety in the learning environment, (b) graduate student to graduate student relationships, (c) graduate student to instructor relationships, (d) graduate student self-efficacy, (e) graduate student motivation, (f) graduate student faculty mentoring, (g) graduate student integration, (h) graduate student use of technology, and (i) graduate student study habits. The dependent variable for the study was graduate student academic achievement measure by self-reported graduate student

grade point average (GPA). The second chapter included a review of the literature on the dependent and independent variables. Factors theoretically relevant to graduate student academic achievement were graduate student individual differences based on the factors of engagement and academic achievement. The third chapter explained the theoretical framework of the study which derived from Tinto's (1975) Theory of Student Retention, Tinto's (1975) Student Integration Model, Hirschi's (1969) Social Control Theory, and Bandura's (1977) Theories of Self-Efficacy and Social Cognition. The social cognitive theory can motivate a person towards involved in different activities as the process of cognition uses data obtained from personal actions or from observing others (Ponton & Rhea, 2006). Chapter IV focused on the research methodology and design, sampling procedures, setting, instrumentation, working with human subjects, and data collection procedures. Chapter V centered on analyzing the data collected from the surveys, interviews, and focus groups.

### **Findings**

Chapter VI discusses the findings, conclusions, implications, and recommendations for leaders and future research. The data was collected from graduate students through surveys, interviews, and focus groups. Surveys collected from 209 graduate students were the quantitative element of the mixed method. The Pearson correlation helped the researcher examine many relationships. Tables 13-19 in Chapter V provide the correlation results calculated with SPSS. The results indicated that there were no significant relationships for any of the independent variables listed in the tables. The following research questions were addressed in the study:

- RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?
- RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?
- RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?
- RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?
- RQ5. Is there a significant relationship between graduate students' motivation and academic achievement?
- RQ6. How does graduate students' faculty mentoring influence academic achievement?
- RQ7. How does graduate students' integration influence academic achievement?
- RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?
- RQ9. Is there a significant relationship between graduate students' use of technology and academic achievement?
- RQ10. Which independent variable has the greatest relationship with academic achievement?
- RQ11. Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?

The purpose of the study was to examine the relationship between factors of graduate student engagement and academic achievement of graduate students enrolled in programs at an urban research institution in the Southeastern region of the United States. Graduate student participants of the mixed methods study provided views and perspectives on the issue of graduate academic achievement.

The demographic data revealed that 71% of the students were African American, 20% Arab, 9% other, and 1% white. Graduate student participants were 64% female and 36% male. The respondents consisted of 20% from the School of Arts and Science, 21% from the School of Education, 23% from the School of Business, and 36% from the school of Social Work. Approximately 22% of the participants were the first person in the family to attend college, 74% of the participants were not the first person in the family graduate from college, while nearly 73% of respondents were attending their first graduate program. Financially, 80% of the respondents received financial aid and 20% did not receive financial aid.

RQ1. Is there a significant relationship between graduate students' safety in the learning environment and academic achievement?

The results of the survey questions 11–13, indicated that there was no significant relationship between graduate student's safety in the learning environment and academic achievement. Evidence was revealed by the .089 Pearson correlations at the .199 significant relation coefficient. Based on the results of the qualitative data analyzed, there was a significant relationship between graduate students' safety in the learning environment and academic achievement. The majority of graduate students interviewed

88% or 7/8 respondents felt safe walking to their cars, after attending night classes. Three quarters or 75% of respondents interviewed felt the campus was adequately policed. Most of those respondents that did not feel safe reported mitigation of the circumstances by increased campus security measures, such as calling the police for an escort and walking in groups to their cars after class. .

RQ2. Is there a significant relationship between graduate student-to-student relationships and academic achievement?

The results of the analysis of survey questions 14–17 revealed that there was no significant relationship between graduate student-to-student relationships and academic achievement. Evidence was revealed by the -.009 Pearson correlations at the .900 significant relation coefficient. Based on the qualitative data analysis the majority of graduate students interviewed (88%) as well as the focus group participants (89%) felt there was a significant relationship between graduate student-to-student relationships and academic achievement. The majority of graduate students from the focus groups (94% 15/16 participants) as well as graduate students interviewed (75% 6/8 participants) felt like they experienced positive interactions and enjoyed working in groups with other graduate students. The majority of graduate student interviewed (75%, 6 interview respondents) felt like it was a good or great idea for graduate students to interacting outside the classroom for non-academic reasons. Generally, 62.5% of the interviewed respondents felt that because of graduate students to student relationships reviewing study materials was a good idea. Graduate students felt that working together on the

same path created relationships that developed trust as graduate students helped each other obtain high levels of academic achievement.

RQ3. Is there a significant relationship between graduate student-to-faculty relationships and academic achievement?

The analysis of survey questions 18–21 indicated no significant relationship between graduate student to faculty relationships and academic achievement. The observed probability value for graduate student to faculty relationships was greater than .05. Based on the analysis of the qualitative data, graduate students overwhelmingly felt that there was a significant relationship between graduate student to faculty relationships and academic achievement. The majority of interviewed respondents (88% or 7/8 students) felt comfortable with interactions with faculty members during lectures and contacting faculty members by telephone.

RQ4. Is there a significant relationship between graduate students' self-efficacy and academic achievement?

The analysis of the survey questions 22–24, indicated no significant relationship between graduate students' self-efficacy and academic achievement. The observed probability value for graduate students' self-efficacy was greater than .05. Based on the qualitative data analysis graduate students overwhelmingly felt that there was a significant relationship between graduate self-efficacy and academic achievement. The majority of graduate students interviewed, 88% or 7 of 8 respondents believed in the student's ability to be successful in the program. Participants overwhelming felt that



confidence and ability were significantly related the students' ability to be successful academically.

RQ5. Is there a significant relationship between graduate students' motivation and academic achievement?

The data from survey questions 28–29 showed no significant relationship between graduate students' motivation and academic achievement. The observed probability value for graduate student's motivation was greater than .05. Based on the results of the qualitative data analysis graduate students overwhelmingly felt that there was a significant relationship between graduate students' motivation and academic achievement. The majority of the graduate students interviewed 75%, 6/8 of the respondents felt like motivation towards academics derived from a combination of internal and external factors such as knowledge and income, yet external factors such as income and faculty encouragement provided greater motivation.

RQ6. How does graduate students' faculty mentoring influence academic achievement?

Based on the results of the focus groups, 100% of the participants felt like graduate students' faculty mentoring positively influenced academic achievement. The analysis of interviews questions 26–28 also revealed that the majority of respondents 88% 7 or 8 felt like students with faculty mentors relationships perform better academically. One student stated, "Sometimes students don't need a mentor to get a high GPA" (Participant SSWFGA, personal communication, April 18, 2016).

RQ7. How does graduate students' integration influence academic achievement?

The analysis of focus group questions revealed that nearly 63% 5/8 respondents believed the University's Student Affairs Department did not help to build overall campus spirit among graduate students. The majority 94%, 15/16 respondents believed that graduate students' integration only really took place within the departments among students that started the program around the same time period. Most focus group participants 81%, 13/16 respondents felt like graduate students' integration positively influenced academic achievement.

RQ8. Is there a significant relationship between graduate students' study habits and academic achievement?

The analysis of survey questions 35–38, indicated no significant relationship between graduate student's study habits and academic achievement. Data were revealed by the .096 Pearson correlations at the .167 significant relation coefficient. Based on the analysis of the qualitative interview data, most respondents 88% felt like there was a significant relationship between graduate students' study habits and academic achievement. The majority of the interview participants 88%, 7/8 respondents also believed that graduate students focused on completing assignments directly related to academic achievement.

RQ9. Is there a significant relationship between graduate students' use of technology and academic achievement?

The results of the survey questions 39–40, indicated that there was no significant relationship between graduate students' use of technology and academic achievement. Data was revealed by the -.074 Pearson correlations at the .290 significant relation

coefficient. The majority of interview participants 88% or 7/8 respondents believed technology provided an important visual support that enhanced learning. Most of the graduate students interviewed 75% or 6/8 respondents also believed that Microsoft PowerPoint was the most often used form of technology as faculty and students performed presentations.

RQ10. Which independent variable has the greatest relationship with academic achievement?

Graduate students' motivation had the greatest impact among independent variables. The survey results indicated a  $R^2$  change of .028 or a 2.8% impact on academic achievement.

RQ11. Is there a significant difference among independent variables based on the school in which the graduate student was enrolled?

The results of the quantitative analysis revealed:

1. There was a significant difference between safety in the learning environment in the School of Education and School Arts and Sciences.
2. There was a significant difference between Safety in the Learning Environment in the School of Education and the School Business
3. There was a significant difference between Student Faculty Relationships in the School of Education and the School of Arts and Sciences.
4. There was a significant difference between Student Faculty Relationships in the School of Education and the School of Business.

5. There was a significant difference between Student Faculty Relationships in the School of Business and the School of Social Work.
6. There was a significant difference in Mentoring in the school of Business and in the School of Education.
7. There was a significant difference in Mentoring in the School of Business and in the School of Social Work.
8. There was a significant difference in Graduate Student Mentoring in the School of Business and the School of Arts and Sciences.
9. There was a significant difference in Mentoring in the school of Education and the school of Social Work.
10. There was a significant difference in Student Integration in the school Education and the school of Business.
11. There was a significant difference in Study Habits in the School of Education and the School of Business.
12. There was a significant difference in Study Habits in the school of Social Work and the School of Business.

### **Implications**

The study researched the relationship between factors of graduate student engagement and academic achievement of graduate students enrolled in programs at an urban research institution in the Southeastern region of the United States. The results of researching and analyzing the data collected revealed several implications and conclusions.

### **Safety in the Learning Environment**

The implications for safety in the learning environment were as follows:

Graduate students' answers to interview questions indicated that students did not feel safe walking to their cars after attending night classes. Perhaps, such feelings may have been attributed to the walk from the School of Social Work which is located just inside the campus boundaries with two large unmonitored entrances and exits on both sides of the building. The lone respondent was female being the first person in the family to attend college. Twenty-five percent of the interviewed respondents who felt the campus was not adequately policed could have been a consensus between the lone respondents which were two female first generation respondents from the School of Social Work. Students interviewed that did not feel safe were both female from the School of Education and the school of Social Work. The responses could have been based on the fact that both students were females possibly traveling alone after class.

### **Student-to-Student Relationships**

The implications for student-to-student relationships were as follows: Graduate students' answers to interview and focus group questions indicated that less than 25% of the respondents felt like there was no significant relationship between graduate student-to-student relationships and academic achievement. The findings could have been attributed to the graduate students who felt like their lives were too busy with other responsibilities outside the classroom that made relationships development less important. Also, only one female graduate student interviewed from the School of Social Work did not feel there was a significant relationship between graduate student-to-

student relationships and academic achievement. Based on researcher findings, one female focus group respondent did not feel like there were positive interactions when working in groups on academic assignments, yet she transitioned immediately from undergraduate studies to attend her first graduate program in the School of Education. Also, 25% or two graduate students interviewed did not enjoy working in groups for non-academic reasons. The students felt like there were too many work and family obligations which did not provide enough time to interact outside the classroom for non-academic reasons.

The lack of a significant relationship between graduate student-to-student relationships and academic achievement could also have be attributed to the 25% or two female graduate students from the school of Social Work did not share study materials with other graduate students due to the competition within the program.

### **Student to Faculty Relationships**

The implications for the student to faculty relationships suggested that there was minimal contention in the area of student-faculty relationships. The majority of interview respondents felt comfortable interacting with faculty member during lectures. Twelve percent or one female graduate interviewed from the school of Social Work indicated that others were comfortable interacting during the lecture, but she did not interact during the lecture. Lack of interaction during the lecture could have been attributed to the students' feeling free to call after business hours or the student's preference to use email as a method of communication.

**Student Self-Efficacy**

The implications for the majority of student that believed in their ability to be successful in the program indicated that less than 13% or one African American female interviewee did not believe in her ability to be successful in the program. The implication suggests that the sole interviewee was attending her first year of graduate school in the school of Business. The respondent was also the first person in her family to attend graduate school. The female graduate also had a grade point average of 3.4 on a 4.0 scale.

**Student Motivation**

The implications from the interview data suggest that even though the majority of graduate student felt that academic motivation derived from internal and external factors, 26% or two interview respondents did not feel like academic motivation derived from a combination of internal and external factors. The first student believed that motivation derived from completely external factors such as jobs and income. The first student was also a female who was not the first person in her family to attend or graduate from college. She was a fifth-year graduate with a 4.0 grade point average from the School of Arts and Sciences. The second female student believed that motivation derived from only internal factors such as increased knowledge and feelings of accomplishment. The second student was not the first person in her family to attend college and graduate from college. She was a first-year, 3.0 grade point average attendee in the school of Social Work. Most interviewees felt like motivation derived from external factors such as income and faculty encouragement. The implications were that less than 26% or two

interview respondents feel like greater levels of students' academic motivation derived from internal factors. The first female student from the School of Education believed that greater motivation derived from a sense of satisfaction. She was as a fourth-year student with a grade point average of 4.0 and was not the first person in her family to attend or graduate from college. The second female student from the School of Arts and Sciences believed that greater motivation derived from gaining knowledge. The second student was attending her first graduate program but was not the first person in her family to attend and graduate from college. She was a third-year, 3.4 grade point average graduate school attendee.

### **Student Faculty Mentoring**

There was a variation on the views on how graduate students' faculty mentoring influenced academic achievement. Understanding that the majority of graduate students interviewed felt like students with faculty mentoring relationship performed better, it could also be concluded that some students did not feel like faculty mentoring influenced academic achievement. The implications were that faculty should encourage students to continually educate themselves on mentoring inside and outside the classroom. The data revealed that one female student interviewed from the school of Business did not feel like graduate students with mentors performed better academically. The student did not feel like mentors were needed. The female student had a 3.4 grade point average attending her first graduate program, but was not the first person in her family to attend or graduate from college. The student said the following: "Mentoring depends because sometimes



people don't need a mentor to get a high GPA, but as far as career wise they would help them, but not academically" (BUS1, personal communication, April 20, 2016).

### **Student Integration**

The implications from the student integration findings are as follows: The graduate student answers to the focus group questions indicated that they felt like the University's Student Affairs Department did not help build campus spirit. The two female focus group respondents from the School of Education may have felt that way because they believed the Educational Leadership Student Association (ELSA) helped to build campus spirit and increase academic achievement among graduate students. One female respondent from the School of Business felt like the campus did not help build campus spirit because the lack of integration feeling transferred from the years of attending the university as an undergraduate student. Nearly one-fifth of the focus group participants did not feel like graduate students' integration influenced academic achievement. Perhaps the respondents felt like integration did not affect them academically because they were all graduate students attending their first year of graduate school in the School of Business.

### **Study Habits**

The majority of the interviewed participants believed graduate students' focus on completing assignments was directly related to academic achievement. This fact implies that nearly one-eighth of the interview participants believed that the student's focus on completing assignments was not related to academic achievement. The facts may have been that because the female from the School of Social Work was the first person in her

family to attend and graduate from college. She was also a third-year graduate student with a 3.5 grade point average. The respondent believed that Canvas the online Content Management System (CMS) should be used to provide students with reminders which would increase student focus. The majority of the interview participants 88% or 7 of 8 respondents believed there was a significant relationship between graduate students' study habits and academic achievement. The fact implies that one-eighth or one female graduate interviewee from the School of Social Work did not believe there was a significant relationship between study habits and academic achievement. The female graduate student felt like there was no relationship between the disciplined behavior required to get the work done and academic achievement because students who could not achieve an A or B would be removed from the program. Perhaps the belief also related to the student being the first in her family to attend graduate school, yet she bolstered a 3.0 grade point average in her first year of graduate school.

### **Student Use of Technology**

There was a variation in the views on students' use of technology. First, the students' reply to the survey questions indicated that there was no significant relationship between the students' use of technology and academic achievement. The majority of the interview participants 88%, or 7/8 respondents believed technology provided important visual support that enhanced learning. The data implies that one female graduate interviewee from the school of Social Work did not believe that technology provided important visual support. Perhaps, the student felt that way because professors no longer perform the number of presentations as compared to the number of presentation

performed when the interactive white boards were initially introduced. Student had also begun the use of online textbooks in the classroom. The student said the following:

I really don't see, like at this point in time I don't see them [Interactive White Boards] doing that much; like they [Interactive White Boards] were used back in the day. Everything is online; you literally are in class looking at a computer, looking at a textbook during lectures. You are looking at presentation by the professors; I really don't think they do anything anymore. (SSW1, personal communication, June 6, 2016)

### **Greatest Impact on Academic Achievement**

Motivation as the variable that had the greatest impact on academic achievement had the following implications. Possibly, graduate student goal attainments could have helped to build the credentials and achieve self-actualization at the top of Maslow's (1954) Hierarchy of Needs. Graduate students could have had a vested financial interest which often helped to increase student attitude and motivation. Perhaps, graduate students were motivated to achieving the goal of a higher degree both Masters and Doctoral. Nearly 81% of the survey participants received financial aid. Jackson and Reynolds (2013) held that black students often leave college with higher loan payoffs and higher risks of defaulting. Donald, Siegel, and Crano (2016) concluded that people's attitude relates to consistent behavior when the outcome is deemed important and relevant. Research often reveals a strong relationship between the attitudes and behaviors of vested students (Donald, Siegel, & Crano, 2016).

### **Differences among Variables**

The implications for the significant difference among independent variables based on the school that the graduate students' were enrolled are as follows: A significant difference between safety in the learning environment in the School of Education and School of Arts and Science could be connected to the Arts and Sciences school's external building location. Specifically, the department in the school of Arts and Sciences was located off campus near the football stadium, while the School of Education was located on campus. The size of the graduate student population in the school of Education appeared to be more collegial as students had a closer relationship and interactions with each other. The faculty in the School of Education often promoted safety encouraging students to walk together, check on each other, and develop greater relationships.

The significant difference between safety in the learning environment in the School of Education and School of Business could be connected to the 61% of survey respondents from the School of Business that did not feel safe walking to their cars at night while 67% of the surveyed respondents from the School of Education did feel safe walking to their cars at night. The significant difference between safety in the learning environment in the School of Education and School Business could have been implied by the stronger graduate student-to-student interactions in the School of Education as initiated by faculty teaching practices which encourage students to look out for each other's safety by participating in such actions as walking to their cars together after class.

Nearly 84% of the students surveyed from the School of Education strongly agreed that students felt comfortable interacting with faculty members during the lecture,

while only 24% of the students from the school of Arts and Sciences strongly agreed that students felt comfortable interacting with faculty members during the lecture. A significant difference between graduate student faculty relationships in the School of Education and the School of Business could be attributed to a work engaged life and the night class schedule of students in the School of Education. All or 100% of the interviewed respondents from the school of Education worked during the day and attended night classes while nearly 88% of the respondents interviewed from the School of Business did not work, but 100% attended day classes.

A significant difference between graduate student faculty relationships in the School of Business and the School of Education could have been attributed to the fact that nearly 18% of the Business school survey respondents strongly agreed that students interact with faculty members during lectures, while nearly 40% of the Social Work respondents strongly agreed that students interacted with faculty members during lectures.

The significant difference was found between graduate students' mentoring in the School of Business and the School of Education, School of Social Work, and the School of Arts and Sciences. The findings could have been attributed to the 20% of surveyed respondents from the Business school that believed the Graduate student faculty presented themselves as open and approachable, while 80% surveyed from the Schools of Education, Social Work, and Arts and Sciences, felt like mentors were not open and approachable but faculty had skill sets that provided the knowledge and experience to assist with career attainment.

A significant difference between graduate students' mentoring in the School of Business and the Schools of Education, Social Work, and Arts and Sciences may have been attributed to the fact that 29% surveyed from the School of Business agreed the students identified with faculty members as a mentor. Nearly 40% of the respondents from the School of Arts and Sciences felt like students identified with faculty members as a mentor. Nearly 61% surveyed from the School of Education felt like students identified with a faculty members as a mentor. The majority or 74% of respondents from the School of Social Work agreed that students identified with a faculty member as a mentor.

The significant difference between graduate students' integration in the School of Education and the School of Social Work may have been attributed to the 11% of the survey respondents from the School of Education disagreed and did not identifying with faculty members as a mentor, while 22% of graduate students respondents from the School of Social Work disagreed with identifying with faculty members as a mentor.

The significant difference between graduate students' integration in the School of Education and the School of Business could have been attributed to the fact that 14% of the surveyed respondents from the School of Education disagreed that students spoke of shared attitudes towards academic work, while nearly 43% of the respondents from the School of Business disagreed that students spoke of shared attitudes towards academic work.

A significant difference between graduate student study habits in the School of Education and the School of Business could have been attributed to the difference in class schedules as the School of Business graduate students only attended day classes while the

Schools of Education and Social Work graduate students only attended night classes.

The significant difference between graduate student study habits in the Schools of Education and Social Work could have been linked to the survey responses. Nearly 13% of the respondents from the School of Business strongly agreed that students focused on completing assignments, while 41% of the respondents from the School of Social Work strongly agreed that students focused on completing assignments. The significant difference between study habits in the Schools of Business and Social Work could also have been attributed to department participation in the sample. Approximately 20% of the sampled populations were from the School of Education as opposed to 36% of the sampled participants from the School of Social Work.

## **Recommendations**

### **Recommendations for Practice**

Regarding graduate student engagement, the study suggested that improvements can take place in the areas of: Safety in the Learning Environment, Student-to-Student Relationships, Student to Faculty Relationships, Self-Efficacy, Student Motivation, Student Faculty Mentoring, Student Integration, Student Study Habit, and Student use of Technology. When considering the relationship between engagement and academic achievement for African-American graduate students there are several recommendations to consider:

**Safety in the Learning Environment**

- Faculty members should reinforce safety practices by mentioning such practices as timely escorts to cars, better use of security cameras, and the user of call box locations in highly used areas.
- Faculty should encourage graduate school organizations to present student led seminars on school safety each semester, providing tips that have worked such as traveling in pairs or groups.

**Student-to-student Relationships**

- Faculty should incorporate more innovative teaching practices and assignments where faculty can encourage relationship development among graduate students, especially for international students and others that often work alone.
- Faculty members can gain from using Facebook and Twitter to initiate interaction and relationship building between graduate students.
- Faculty members should review and share pedagogies that encourage students towards in-depth conversations that build relationships.
- Faculty should help increase student interactions by adding blogging assignments and other engagement assignments to the course curriculum.
- Faculty should promote the use of study groups in preparations for various assessments on the college campus such as semester tests and comprehensive examinations.



**Student-to-Faculty Relationship**

- Faculty should encourage students to use their cell phones to respond to questions that are aligned to learning outcomes before, during, and/or after class meetings.
- Faculty members should require that students use more technological platforms of communication or applications with other students, such as Whisper, Yik Yak, and Confide to increase student communications.
- Faculty members should require a student office visit as one of the early course assignments in order to build the faculty student relationship.
- Faculty members should have virtual office hours via the use of technology to communicate and build relationship with students.
- Faculty member should provide students with office hours, yet additional hours may be required for non-dissertation students who may require meetings before 5:00 p.m.

**Students' Self-Efficacy**

- Faculty should use innovative teaching techniques to increase student self-efficacy by providing qualitative feedback, offering praise, and setting attainable goals especially with students that show minimal participation.
- Faculty should increase the use of graduate student led activities which would help increase student self-confidence.

- Faculty members should incorporate practices that provide graduate students with greater support, more frequent positive feedback which could encourage student ability and belief.

### **Student Faculty Mentoring**

- Faculty should encourage student to continually educate themselves on mentoring inside and outside of the university.

### **Students' Motivation**

- Faculty members should increase teaching methods that utilize more student autonomy to increase student mastery.
- Faculty members should use mobile devices for in or out of class assignments and quizzes to help increase student motivation.

### **Students' Integration**

- Faculty member can encourage students to become more involved in activities outside the department.

### **Students' Study Habits**

- Faculty should employ assignments outside the classroom such as research topics, mentoring, and individual student interests projects to help graduate students find additional areas of interest and increase study habits.
- Faculty members should incorporate the use of a study habits checklist as an initial assignment to help students assess and increase study habits, which often help increase academic achievement. Credé and Kuncel (2008) agreed that study habits are one of the predictors of academic achievement.

### **Students' Use of Technology**

- Faculty member should perform more presentations using the Interactive White Boards (IWBs) to enhance student learning.
- Faculty members should increase the varying functional uses of Interactive White Boards (IWBs) such as textbook displays, online videos, and interactive student input which all provide enhance visual support and learning.
- Faculty should employ practices that tap into the need to self-actualize by providing more assignments connected to employment and goal attainment.
- Instructional methods implemented that create more of a social environment the welcomes graduate students can be implemented in the classrooms.

### **Recommendations for Policy**

#### **Safety in the Learning Environment**

- The university leadership should require that once Police escort are called, that such escorts arrive within a reasonable time period in order to escort students.
- The university leadership should provide more working and visible strategically placed call boxes on the campus.
- The university leadership should ensure that video cameras are working, correctly position, and consistently monitored to provide students with addition levels of security.
- The university leadership team should special consideration to the requirements (female population, evening classes, & international student) of graduate programs when planning and providing security awareness measures and

services. For examples, public safety offices should be additionally visible as night classes release, the doors of buildings with classrooms should not be locked at 7:00 p.m. as many night classes for student begin.

- Administration should provide greater campus security awareness of the services offered to all students via pamphlets, emails, and the school website.
- Require students new to the university to attend orientation session and sign off about information pertaining to personal knowledge about safety services provided by the universities public safety department.
- Administration should provide intruder alerts banners and safety drill schedules on the Website.
- Students should be informed of the public safety department emergency phone number, which should be posted and highly visible to all students.

### **Student-to-student Relationships**

- Expand orientation of new students to include sessions where students are required to work together and develop friendships. These sessions should be ongoing.
- Administration should require that department Chairs assess faculty instruction and make recommendations that require students to share ideas.
- Leaders can implement campus changes in the environment that encourage and rewards domestic students for interactions between international students.

- Administration should require department Chairs to recommend that faculty members include assignments via Canvas that require students to share study materials.

### **Student-to-Faculty Relationships**

- Administration should require that department Chairs encourage faculty members to use technology in the classroom to communicate with students.
- Administration should require department Chairs to encourage faculty members to work flexible office hours in order to meet the needs of all students. Such work hours, could be enhanced with the use of technology so working graduate students could meet with faculty members whenever personal work schedules permit. Skype is one such software application that would meet the needs of faculty and students.

### **Students' Self-Efficacy**

- Leadership should use a policy that greatly encourages faculty to use a blended instructional delivery method to meet the learning needs of all students and increase student self-efficacy.
- Administration should make policy that requires Chairs to encourage faculty to use the Canvas system in each class to help increase student participation and success.

**Students' Motivation**

- Leaders should implement policy that requires Chairs to encourage faculty to promote student learning experiences with assignments that help increase student motivation and promotes commitment to the university.

**Students' Mentoring**

- Administration should formalize a mentoring program which assigns a faculty member for every graduate student. Faculty will need to receive additional training on mentoring.
- Administration should make a policy where during orientation; new students are required to attend a session on the process and benefits of mentoring.
- Administration should implement and provide more formal mentoring programs for graduate students.
- Administration should require the department Chairs to encourage faculty to tap into the alumni in order to serve, promote, and encourage motivation among the graduate student population.

**Students' Integration**

- Administration should increase graduate student knowledge in the area of integration by providing inserts into orientation while also providing class sessions throughout the students' matriculation.
- Administration should provide additional opportunities during the week and on the weekends for graduate student to volunteer and gain experience on campus

which may lead to substantial interactions and integration with the campus community.

### **Students' Study Habits**

- Administration should suggest that department chairs encourage faculty members to incorporate Canvas in assignments as technology provides an update to the students increasing their focus on assignments.

### **Students' Use of Technology**

- The university should place strong emphasis on implementing and integrating technology into the graduate student experience by providing a session during new student orientation that focuses on ensuring student are given access to the latest technology to include email, popular social media applications, and the Interactive White Boards (IWBs).
- The university should require that all faculty members attend classes on Microsoft Suite, Interactive White Boards (IWBs), and Canvas the Content Management System (CMS).

### **Further Research**

The study revealed that further research in the area of the relationship between academic achievement and factors of engagement such as student relationships, student faculty relationships, self-efficacy, motivation, integration, and study habits would be beneficial.

**Safety in the Learning Environment**

- Conduct a larger longitudinal study, comparing gender and age, prior to and after safety policy implementations.
- Conduct a larger longitudinal study on student safety for all students enrolled at the university.
- Conduct a larger longitudinal study on student safety for all students enrolled at the university that includes the independent variables and student-initiated strategies to include those students who mitigate their circumstance to stay safe on campus.

**Student-to-student Relationships**

- Conduct a longitudinal study over a period of 2 years on the needs of millennial graduate students and their relationship needs.
- A detailed qualitative study that explores students understanding of outcomes that are derived from interactions with other graduate students while working on academic assignments.

**Graduate Student-to-Faculty Relationships**

- Mixed method study on the relationship between student faculty relationships and graduate student grades.

**Graduate Students' Self-Efficacy**

- Longitudinal study on the effects of self-efficacy on retention of first year African-American graduate students



**Graduate Students' Motivation**

- A longitudinal study that examines the results of consistent increased faculty' interaction and student engagement across the academic year.

**Graduate Students' Faculty Mentoring**

- Mixed method research that determined the most important mentoring factors for African-American graduate students at a historically black college and university (HBCU).
- The mentoring influence of faculty members on the academic achievement of graduate students at a historically black college and university (HBCU).
- A longitudinal study on the faculty mentoring of African American Graduate students at a historically black college and university (HBCU) from first year to graduation.
- A qualitative analysis of African-American graduate student academic achievement and faculty mentoring experiences.

**Graduate Students' Integration**

- Mixed method study on Integration factors related to the academic achievement of African-American graduate students at a historically black college and university (HBCU).
- The impact of the minority status of African-American graduate students on academic achievement at a predominately white university.
- The integration of first-year African-American graduate students at a historically black college and university (HBCU).

- Perceptions of African-American graduate students on the relationship of integration and academic achievement at a historically black college and university (HBCU).

### **Graduate Students' Study Habits**

- A qualitative study that discovers the most important study habits for African-American graduate students attending a historically black college and university (HBCU).
- A qualitative study on the relationship between graduate student academic discipline required to get the work done and academic achievement.
- A qualitative study on the role of study habits which effect the motivation of African-American undergraduate students.

### **Graduate Students' Use of Technology Recommendations**

- Conduct a study to determine the effect of Interactive White Boards' (IWBs) Integration into classroom instruction for graduate students at a historically black college and university (HBCU).
- A case study of Interactive White Boards (IWBs) as a professional development tools for faculty at a historically black college and university (HBCU).
- Interactive White Boards (IWBs) use to change faculty pedagogy for graduate students at a historically black college and university (HBCU).

### **Greatest Impact on Academic Achievement**

- A mixed method study on the relationship between graduate students' motivation and academic achievement.

- The relationship between motivation and academic achievement for doctoral students at a historically black college and university (HBCU).
- The academic achievement impact of administrative policy on graduate student at a historically black college and university (HBCU).

### **Differences among Variables**

- Examine the experience of African-American graduate students and distinguish common engagement factors of graduate students from different department at a historically black college and university (HBCU).
- The impact of motivation and self-efficacy on the academic achievement of African-American graduate students at a historically black college and university (HBCU).
- Graduate student engagement of first-year African-American graduate students at a historically black college and university (HBCU).

### **Conclusions**

Overall, the data indicated that no significant relationship existed between safety in the learning environment, graduate student-to-student relationships, graduate student to faculty relationships, self-efficacy, motivation, graduate student integration, study habits, technology, and graduate student academic achievement. Yet, the results did reveal a statistically significance relationship between graduate student mentoring and academic achievement. The Analysis of Variance (ANOVA) indicated a significant difference among the four schools in the area of safety in the learning environment, graduate student faculty relationships, graduate students' mentoring, graduate students' integration, and

graduate students' study habits. The data also revealed that the School of Education graduates responded with higher levels safety in the learning environment, graduate student to faculty relationships, graduate students' mentoring, graduate students' integration, and higher levels of graduate students' study habits than graduate students from any of the other three schools.

## APPENDIX A

### Survey Questionnaire

Thanks for taking the time and agreeing to participate in the research study. Completing the survey indicates that you are 18 years of age or older and indicates your consent to participate in the research. Please **CIRCLE** the corresponding answers:

Please select ONE from each which best describes you:

1. Which graduate school do you currently attend?
  - a) School of Arts and Sciences (A)
  - b) School of Education (B)
  - c) School of Business (C)
  - d) School of Social Work (D)
  
2. Is this the first graduate program that you have attended?
  - a) Yes
  - b) No
  
3. Are you the first person in your family to attend college?
  - a) Yes
  - b) No
  
4. Are you the first in your family to graduate from college?
  - a) Yes
  - b) No
  
5. What is your Grade Point Average?
  - a) 4.00 – 3.75
  - b) 3.74 – 3.50
  - c) 3.49 – 3.25
  - d) 3.24 – 3.00
  
6. What year of graduate school are you currently attending?
  - a) 1<sup>st</sup> Year
  - b) 2<sup>nd</sup> Year
  - c) 3<sup>rd</sup> Year
  - d) 4<sup>th</sup> Year
  - e) 5<sup>th</sup> Year

7. Have you taken any time off since starting your current graduate program?  
a) Yes                      b) No
8. How would you classify yourself based on race?  
a) Black or African American  
b) White  
c) Arab  
d) Hispanic  
e) Other
9. Do you receive Financial Aid assistance for your current program?  
a) Yes                      b) No
10. Is your sex male or female?  
a) Male                      b) Female

## APPENDIX B

### Graduate Student Interview Questions

I \_\_\_\_\_ hereby give my permission for Emmett E. Ward III to interview me and quote my responses in a scholarly research paper. I understand that this research paper will be submitted to a professor at the Clark Atlanta University. I understand that I waive any claim to copyright to this material should the student ever publish it in a scholarly journal or in electronic format online. I understand that the author **will** maintain my anonymity as a part of this interview. I hereby give my permission in the form of my signature below.

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

Please **Answer** the following questions:

1. Which graduate school do you currently attend?
2. Is this the first graduate program you have attended?
3. Are you the first person in your family to attend college?
4. Are you the first person in your family to graduate from college?
5. What year of graduate school are you currently attending?
6. What is your Grade Point Average?
7. Have you taken any time off since starting your current graduate program?
8. How would you classify yourself based on race?
9. Do you receive Financial Aid assistance for your current program?
10. What is your sex?

Safety in the Learning Environment

11. How do students feel about taking classes on the campus at night?
12. Is the university's campus adequately policed?
13. How physically safe are students when walking to their cars at night after class?

Student to Student Relationships

14. How enjoyable is it working in groups with other students?
15. What are your personal views on student interacts for non-academic reasons outside the classroom?
16. What are your thoughts on students reviewing and sharing study materials with each other?

#### Student to Faculty Relationships

17. How comfortable are student commenting and/or being critical of faculty statements during lectures?
18. How comfortable are students communicating with faculty members outside the classroom?
19. What are your ideas on the freedom of students to contact faculty members about academic issues by phone?

#### Self-Efficacy

20. How confident are students in their ability to participate in lectures?
20. What are student beliefs in their ability to be successful doing class assignments?
21. What is the confidence level of students' in their ability to graduate from the program?

#### Motivation

22. Are graduate student motivated to perform academically by internal or external factors?
23. What internal factors often help students perform academically?
24. What external factors often help students perform academically?

#### Mentoring

25. How do students identify possible faculty member as a mentor?
26. How to students feel about faculty members giving guidance and support?
27. How do students with mentoring relationships perform academically?

#### Student Integration

28. What are the students' shared attitudes towards the academic work?
29. How often do students express a shared belief about how the institution operates?
30. How does the university help build campus spirit among graduate students?

#### Study Habits

31. How focused are students when it comes to completing assignments?
32. What is the academic discipline level among graduate students in your particular program?
33. What are the students' attitudes when it comes to graduating on time?

#### Technology

34. How frequently do students use the Interactive White Boards (IWBs)?
35. How do the Interactive White Board's (IWBs) enhance learning among students?
36. What is the most used function of the Interactive White Boards (IWBs)?



## APPENDIX C

### Focus Group Questions

"I \_\_\_\_\_, and \_\_\_\_\_, and \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_, hereby give my permission for Emmett E. Ward III to conduct a focus group and quote my responses in a scholarly research paper. The purpose of the study will be to investigate the relationship between factors of graduate student engagement and academic achievement. I understand that this research paper will be submitted to a professor at the Clark Atlanta University. I understand that I waive any claim to copyright to this material should the student ever publish it in a scholarly journal or in electronic format online. I understand that the author **will** maintain my anonymity as a part of this focus group, I hereby give my permission in the form of my signature below."

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_  
Time \_\_\_\_\_

Date \_\_\_\_\_

### **Engagement Questions**

#### Safety in the Learning Environment

1. What are your individual GPA's?
2. How would you describe the safety of the campus environment at night?

#### Student to Student Relationships

3. How would you describe your interactions with other student when working on academic assignments?

**Exploration Questions**

## Self-Efficacy

4. What are the pros and cons of feeling confident about completing academic work?

## Motivation

5. What seems to motivate graduate students to achieve academically?

## Mentoring

6. How do you feel a faculty mentoring relationship affects academic success?

## Student Integration

7. How do you engage and interactions with other graduate students?

## Study Habits

8. What in particular influences academic study habits?

## Technology

9. How are the Interactive White Board (IWB) used in your program?

**Exit Question**

10. Is there anything else you would like to discuss about engagement and/or academic achievement?

APPENDIX D

IRB Letter of Approval to Conduct Research



CLARK ATLANTA UNIVERSITY  
Institutional Review Board  
Office of Sponsored Programs

February 16, 2016

Mr. Emmett Ward III <eward123@gmail.com; emmett.ward@students.cau.edu>  
School of Education,  
Educational Leadership Dept.,  
Clark Atlanta University  
Atlanta, GA 30314

RE: A Correlational Case Study on the Relationship between Graduate Student  
Engagement and Academic Achievement at a Historically Black College and  
University (HBCU).

Principal Investigator(s): Emmett Ward III

Human Subjects Code Number: HR2016-2-632-1

Dear Mr. Ward III:

The Human Subjects Committee of the Institutional Review Board (IRB) has  
reviewed your protocol and approved of it as exempt in accordance with 45 CFR  
46.101(b)(2).

Your Protocol Extended Approval Code is HR2016-2-632-1/A  
Type of Review: Expedited.

This permit will expire on February 15, 2017. Thereafter, continued approval is  
contingent upon the annual submission of a renewal form to this office.

The CAU IRB acknowledges your timely completion of the CITI IRB Training in  
Protection of Human Subjects – “Social and Behavioral Sciences Track”. Your CITI  
Certification expires January 24, 2018.

If you have any questions, please contact the IRB Office or Dr. Paul I. Musey, (404)  
880-6829.

Sincerely:

A handwritten signature in black ink, appearing to read 'Paul I. Musey'. The signature is written in a cursive style and is positioned above a horizontal line.

Paul I. Musey, Ph.D.  
Chair  
IRB: Human Subjects Committee

## APPENDIX E

### Informed Statement of Consent

#### **RESEARCH TITLE**

A CORRELATIONAL CASE STUDY ON THE RELATIONSHIP BETWEEN GRADUATE STUDENT ENGAGEMENT AND ACADEMIC ACHIEVEMENT AT A HISTORICALLY BLACK COLLEGE AND UNIVERSITY (HBCU)

#### **PRINCIPAL RESEARCHER**

Emmett E. Ward III

#### **PURPOSE**

The purpose of the study is to investigate the relationship between factors of graduate student engagement and academic achievement. The participants are invited to participate in this study because he/she is a current student at one of school in the four departments selected for the study. Nearly, 120 graduate students will be recruited for the study. Participation in the study will require thirty minutes to complete the survey, forty minutes to complete the interview, and sixty minutes to participate in the focus group.

#### **PROCEDURES**

Upon agreement to participate in the study, participants will be required to complete the survey, and/or interview, and/or participate in the focus group given by the principal researcher. Participants will be asked to participate in a survey, interview, and or focus group, yet partial or full participation with either or all instruments is voluntary. There will be interactions with other participants while in the focus group conducted at the university during the spring semester of 2016.

#### **RISKS**

Participation in this research study will not be subject to any risks.

#### **BENEFITS**

Participation in the research may benefit the participant personally. The investigative approach will allow participants to explore personal your motivations and perceptions of the factors of engagement while also considering the importance of academic achievement.

Your participation will assist the researcher with examining the relationship between engagement factors and academic performance. Participation will provide insights for college student and administrators.

Completing any instrument indicates that you are 18 years of age or older and indicates your consent to participate in the research.

---

Participant Name (Printed)

---

Participant Signature

---

Date

## APPENDIX F

### Graduate Student Survey Questions

#### **Safety in the Learning Environment**

1. Graduate students feel physically safe taking classes at night on campus.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
2. Graduate students believe the campus is adequately policed.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
3. Graduate students feel safe walking to their cars at night after class.
  - (a) Strongly agree
  - (b) Agree
  - (c) Uncertain
  - (d) Disagree
  - (e) Strongly Disagree

#### **Student to Student Relationships**

4. Graduate students enjoy working in groups with other graduate students.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
5. Graduate students exchange phone numbers with other graduate students.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

6. Graduate students interact outside the classroom for non-academic reasons.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
7. Graduate students review and/or share study materials with other graduate students.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

### **Student to Faculty Relationships**

8. Graduate students interact with faculty members during lectures.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
9. Graduate students feel comfortable making comments and/or being critical of faculty statements during lectures.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
10. Graduate students communicate with faculty members outside of classroom hours.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

11. Graduate students feel free to contact faculty members by phone concerning academic issues.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

### **Self-Efficacy**

12. Graduate students feel confident in their ability to participate in lectures.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
13. Graduate students believe in their ability to be successful completing assignments.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
14. Graduate students are confident in their ability to graduate from the program.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

### **Motivation**

15. Graduate students feel a desire to perform activities for academic satisfaction.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

16. Graduate students perform activities based on internal personal choices.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
17. Graduate students perform activities based on external incentives (friends, grade, etc).
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

### **Mentoring**

18. Many graduate students in the program identify with a faculty member as a mentor.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
19. Graduate students feel faculty members provide useful guidance and support.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
20. Graduate students with mentoring relationships have greater academic success.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree



**Student Integration**

21. Graduate students speak of shared attitudes towards academic work.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
22. Graduate students express shared beliefs about how the institution should operate.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
23. Graduate students believe rules and requirements of the university are fair and properly applied.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
  
24. The university does a good job of helping build campus spirit among graduate students.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

**Study Habits**

25. Graduate students in my program are focused on completing assignments.
  - a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

26. Academic discipline among graduate students in my program is strong.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
27. Many graduate students in the program have a focused attitude towards graduating on time.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree
28. I would rather complete academic assignments instead of spending time partying.
- a) Strongly agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

### **Technology**

29. How frequently do graduate students use the Interactive White Board (IWBs)?
- a) Always
  - b) Frequently
  - c) Sometimes
  - d) Rarely
  - e) Never
30. The Interactive White Boards (IWB) enhances learning among graduate students.
- a) Strongly Agree
  - b) Agree
  - c) Uncertain
  - d) Disagree
  - e) Strongly Disagree

31. Which **ONE** of the functions of the Interactive White Boards (IWB) is used most often?
- a) Internet
  - b) PowerPoint
  - c) Social Media
  - d) YouTube
  - e) Interactive Writing

## APPENDIX G

### Focus Group Recruitment Protocol

Would you be willing to participate for 30 minutes, in a recorded **Focus Group** to examine the relationship between graduate students engagement and academic achievement?

- A. Your information will be kept confidential and your name will not be associated with your instrument.
- B. Please provide your first name and cell number, so that I can contact you to arrange a convenience day and time in the next 30 days.

Name \_\_\_\_\_

Cell Number \_\_\_\_\_

Thank you so much for your time, efforts and consideration.

APPENDIX H

Interview Protocol

**Study**

A CORRELATIONAL CASE STUDY ON THE RELATIONSHIP BETWEEN GRADUATE STUDENT ENGAGEMENT AND ACADEMIC ACHIEVEMENT AT A HISTORICALLY BLACK COLLEGE AND UNIVERSITY (HBCU)

**College**

School of Arts and Sciences \_\_\_\_\_  
School of Education \_\_\_\_\_  
School of Business \_\_\_\_\_  
School of Social Work \_\_\_\_\_

Date \_\_\_\_\_  
Time: Start \_\_\_\_\_ End \_\_\_\_\_

Physical Location \_\_\_\_\_  
Campus Building \_\_\_\_\_  
Interviewed by: Emmett E. Ward III \_\_\_\_\_

**Notes to interviewee**

Thank you for participating in the research study as personal input will be valuable to this research in understanding relationship between factors of graduate student engagement and academic achievement at a HBCU. Please be advised that your participation will be protected and the responses will be kept confidential.

Approximate interview length: 30 minutes.

**Purpose of Research Study**

*The purpose of the proposed correlational case study will be to examine the relationship between factors of graduate student engagement and academic achievement at a HBCU.*

## APPENDIX I

### Categories and Themes

Data Codes	Category	Theme	Definition
IDC1	Learning Environment	Safety in Night Classes	Student safety in the classroom
IDC2		Safety Walking to Cars	Physical safety walking to cars at night
IDC3		Campus Police Presence	Student perception of the visible of police officers
IDC4	Graduate Student Relationships	Interactions in the Classroom	In class collaboration
IDC5		Working in Groups	Completing assignments
IDC6		Study Materials	Review and/or sharing materials
IDC7	Graduate Student Faculty Relationships	Interactions during Lecture	Commenting during lecture
IDC8		Interactions outside the Classroom	Communicating face to face with faculty outside the classroom
IDC9		Interactions by Phone	Calling faculty before or after class
IDC10	Graduate Student Self-Efficacy	Confidence Participating	Confidence commenting during lecture
IDC11		Confidence with Assignments	Confidence completing assignments
IDC12		Confidence Graduating	Confidence in ability to complete program
IDC13	Graduate Student Motivation	Motivated by both internal and external factors	Source of motivational factors
IDC14		Greatest motivational factor	Greatest motivational driver
IDC15		Faculty Members as Motivators	Faculty members as source of motivation.

<b>Data Codes</b>	<b>Category</b>	<b>Theme</b>	<b>Definition</b>	
IDC16	Graduate Student Mentoring	Seeking Available Mentors	Most important mentor characteristic	
IDC17		Guidance and Support	Student feelings about mentor providing guidance and support	
IDC18	Graduate Student Integration	Mentees Academic Performance	How graduate students with mentor perform	
IDC19		Challenging Academic Work	Graduate student shared attitudes about graduate work	
IDC20		Shared Beliefs	Graduate students frequency of sharing beliefs	
IDC21		University do not Build Campus Spirit	Universities rating on building campus spirit	
IDC22		Graduate Student Study Habits	Focus	Graduate student focus with regard to assignment
IDC23			Discipline Levels	Academic discipline level
IDC24	Determination		Student attitude towards graduating on time	

## APPENDIX J

### Voluntary Participation and Withdrawal

Participation in this case study is 100% voluntary and is not required. Participants have the right to personally remove themselves from the study at any time before, during, or after the study. The decision to be removed has no negative impacts. The participants will not face any increased risk or loss of any rights or benefits which you may be entitled to.

#### **CONFIDENTIALITY**

The best effort will be made to maintain the privacy of the participants' personal information and any connection to a survey, interview responses, or notes from a focus group. The use of participants name is not necessary for the study. All identifying information will be removed from all data collection instruments. Any information provided for the case study will only be shared with a third party for the sole purpose of furthering the study and its publication. All information from the case study will be summarized and analyzed using the utmost discretion.

#### **CONTACT PERSON**

For any questions concerning this research study and or your participation, please contact:  
Emmett E. Ward III  
Clark Atlanta University  
Department of Educational Leadership  
223 James P. Brawley Drive S.W.  
Atlanta, Georgia 30313  
Email: [Emmett.ward@students.cau.edu](mailto:Emmett.ward@students.cau.edu)  
Phone: (404) 880-8000

#### **COPY OF STATEMENT OF CONSENT FORM TO PARTICIPANT**

If the participant understands the terms of the study, this form, and is willing to participate, please sign and date the form. A copy of the form can be provided for personal records.

---

Participant Name (Printed)

---

Participant Signature

---

Date



## APPENDIX K

### Survey Protocol

#### **Study**

A CORRELATIONAL CASE STUDY ON THE RELATIONSHIP BETWEEN GRADUATE STUDENT ENGAGEMENT AND ACADEMIC ACHIEVEMENT AT A HISTORICALLY BLACK COLLEGE AND UNIVERSITY (HBCU)

#### **Schools**

School of Arts and Sciences \_\_\_\_\_  
School of Education \_\_\_\_\_  
School of Business \_\_\_\_\_  
School of Social Work \_\_\_\_\_

Date \_\_\_\_\_

Time: Start \_\_\_\_\_ End \_\_\_\_\_

Physical Location \_\_\_\_\_

Campus Building \_\_\_\_\_

Interviewed by Emmett E. Ward III

#### **Notes to interviewee**

Thank for participating in the research study as personal input will be valuable to this research in understanding relationship between factors of graduate student engagement and academic achievement at a HBCU. Please be advised that your participation will be protected and the responses will be kept confidential.

Approximate interview length: 30 minutes.

#### **Purpose of Research Study**

*The purpose of the proposed correlational case study will be to examine the relationship between factors of graduate student engagement and academic achievement at a HBCU.*

APPENDIX L

Interview and Focus Group Recruitment

Would you be willing to participate for 30 minutes, in a recorded Interview and/or a one-hour Focus Group to examine the relationship between graduate students engagement and academic achievement?

- A. Your information will be kept confidential and your name will not be associated with your instrument.
- B. If you are available, would you kindly provide your first name and cell number, so that I can contact you to arrange a convenience day and time in the next 30 days.

30 minute Interview \_\_\_\_\_ and/or One-hour Focus Group \_\_\_\_\_

Name \_\_\_\_\_ Cell Number \_\_\_\_\_

Thank you so much for your time, efforts and consideration.

APPENDIX M

Focus Group Protocol

**Study**

A CORRELATIONAL CASE STUDY ON THE RELATIONSHIP BETWEEN GRADUATE STUDENT ENGAGEMENT AND ACADEMIC ACHIEVEMENT AT A HISTORICALLY BLACK COLLEGE AND UNIVERSITY (HBCU)

**College**

School of Arts and Sciences \_\_\_\_\_  
School of Education \_\_\_\_\_  
School of Business \_\_\_\_\_  
School of Social Work \_\_\_\_\_

Date \_\_\_\_\_

Time: Start \_\_\_\_\_ End \_\_\_\_\_

Physical Location \_\_\_\_\_

Campus Building \_\_\_\_\_

Focus Group Conductor: Emmett E. Ward III

**Notes to participant**

Thank for participating in the research study as personal input will be valuable to this research in understanding relationship between factors of graduate student engagement and academic achievement at a HBCU. Please be advised that your participation will be protected and the responses will be kept confidential.

Approximate length: 45 minutes.

**Purpose of Research Study**

The purpose of the proposed correlational case study will be to examine the relationship Between factors of graduate student engagement and academic achievement at a HBCU.

## APPENDIX N

### Research Questions Matrix

Research Question	Student Survey	Student Interview	Focus Group
1. Is there a significant relationship between graduate student safety in the learning environment and academic achievement?	X	X	
2. Is there a significant relationship between graduate student to student relationships and academic achievement?	X	X	X
3. Is there a significant relationship between graduate student to faculty relationships and academic achievement?	X	X	
4. Is there a significant relationship between graduate student self-efficacy and academic achievement?	X	X	
5. Is there a significant relationship between graduate student motivation and academic achievement?	X	X	
6. How does graduate student mentoring influence academic achievement?		X	X
7. How does graduate student integration influence academic achievement?		X	X
8. Is there a significant relationship between graduate student study habits and academic achievement?	X	X	
9. Is there a significant relationship between graduate student use of technology and academic achievement?	X		

---

Research Question	Student Survey	Student Interview	Focus Group
10. Which independent variable has the greatest relationship with academic achievement?	X		
11. Is there a significant difference among the independent variables based on the school that graduate students attends?	X		

---

## APPENDIX O

### Data Analysis Coding Matrix

Coding	Survey	Interview	Focus Group
Academic Achievement (AA)	X	X	
Safety of the Learning Environment (SLV)	X	X	
Student to Student Relationships (SSR)	X	X	X
Student to Faculty Relationships (SFR)	X	X	
Self-Efficacy (SE)	X	X	
Motivation (MO)	X	X	
Mentoring (ME)	X	X	X
Integration (INT)	X	X	X
Study Habits (SH)	X	X	
Technology (T)	X	X	

## APPENDIX P

### CITI Collaborative Instructional Training Initiative

#### COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM) COURSEWORK REQUIREMENTS REPORT\*

\* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Emmett Ward (ID: 4134545)
- **Email:** emmett.ward@students.cau.edu
- **Institution Affiliation:** Clark Atlanta University (ID: 1387)
- **Institution Unit:** Education
- **Phone:** 678-925-1085
  
- **Curriculum Group:** Social & Behavioral Research - Basic/Refresher
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 2 - Refresher Course
  
- **Report ID:** 18487668
- **Completion Date:** 01/25/2016
- **Expiration Date:** 01/24/2018
- **Minimum Passing:** 75
- **Reported Score\*:** 100

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
SBE Refresher 1 – Defining Research with Human Subjects (ID: 15029)	04/25/14	2/2 (100%)
SBE Refresher 1 – Privacy and Confidentiality (ID: 15035)	04/25/14	2/2 (100%)
SBE Refresher 1 – Assessing Risk (ID: 15034)	04/25/14	2/2 (100%)
SBE Refresher 1 – Research with Children (ID: 15036)	04/25/14	2/2 (100%)
SBE Refresher 1 – International Research (ID: 15028)	06/01/15	2/2 (100%)
SBE Refresher 2 – Federal Regulations for Protecting Research Subjects (ID: 15040)	06/01/15	1/1 (100%)
SBE Refresher 2 – Defining Research with Human Subjects (ID: 15038)	06/01/15	1/1 (100%)
SBE Refresher 2 – Research with Children (ID: 15043)	06/01/15	1/1 (100%)
SBE Refresher 2 – Research in the Public Schools (ID: 15042)	06/01/15	1/1 (100%)
SBE Refresher 2 – International Research (ID: 15045)	06/01/15	1/1 (100%)
SBE Refresher 1 – History and Ethical Principles (ID: 936)	04/25/14	2/2 (100%)
SBE Refresher 1 – Federal Regulations for Protecting Research Subjects (ID: 937)	04/25/14	2/2 (100%)
SBE Refresher 1 – Informed Consent (ID: 938)	04/25/14	2/2 (100%)
SBE Refresher 1 – Research with Prisoners (ID: 939)	04/25/14	2/2 (100%)
SBE Refresher 1 – Research in Educational Settings (ID: 940)	04/25/14	2/2 (100%)
SBE Refresher 1 – Instructions (ID: 943)	04/25/14	No Quiz
SBE Refresher 2 - Instructions (ID: 12629)	06/01/15	No Quiz
SBE Refresher 2 – Informed Consent (ID: 12620)	06/01/15	1/1 (100%)
SBE Refresher 2 – Privacy and Confidentiality (ID: 12622)	06/01/15	1/1 (100%)
Informed Consent in Social & Behavioral Research (ID: 12623)	06/01/15	1/1 (100%)
SBE Refresher 2 – Assessing Risk (ID: 12624)	01/25/16	1/1 (100%)
Conducting Social and Behavioral Research with Children. (ID: 12625)	01/25/16	1/1 (100%)
Social and Behavioral Research in Public Schools (ID: 12626)	01/25/16	1/1 (100%)
SBE Refresher 2 – Research with Prisoners (ID: 12627)	01/25/16	1/1 (100%)
International Social & Behavioral Research (ID: 12628)	01/25/16	1/1 (100%)
Completing the SBR 201 Refresher Course (ID: 12630)	01/25/16	No Quiz
The Regulations and SBR-2 (ID: 12701)	01/25/16	1/1 (100%)
SBE Refresher 2 – History and Ethical Principles (ID: 12702)	01/25/16	1/1 (100%)
Privacy vs Confidentiality in Social & Behavioral Research -2 (ID: 12703)	01/25/16	1/1 (100%)
Social and Behavioral Research With Prisoners - 2 (ID: 12710)	01/25/16	1/1 (100%)
Social and Behavioral Research in Public Schools-2 (ID: 12704)	01/25/16	1/1 (100%)
International Research -2 (ID: 12706)	01/25/16	1/1 (100%)
Ethical Issues inThe Conduct of Social & Behavioral Research With Human Subjects-2 (ID: 12700)	01/25/16	1/1 (100%)
Clark Atlanta University (ID: 12876)	01/25/16	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

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