

ABSTRACT

Collegiate Student-Athletes' Academic Success: Academic Communication Apprehension's Impact on Prediction Models

Kai'Iah A. James

Mentor: Eric L. Robinson, Ph.D.

This dissertation study examines the impact of traditional and non-cognitive variables on the academic prediction model for a sample of collegiate student-athletes. Three hundred and fifty-nine NCAA Division IA male and female student-athletes, representing 13 sports, including football and Men's and Women's Basketball provided demographic information (i.e., race, academic classification, gender, scholarship status) and provided responses to the Academic Communication Anxiety Test instrument. The Associate Athletic Director for Student-Athlete Services provided precollege and college academic information (high school GPA, SAT/ACT score, collegiate GPA) and this information along with data provided by the participants was entered into a multiple regression analysis. The purpose of the study was to determine which variables predicted student-athlete college GPA and if participation in a revenue-generating versus a non-revenue-generating sport impacted college GPA. The analyses indicated that the ACAT was a valid and reliable measure ($\alpha = .94$) with three factors. In addition, high school core GPA, study hall hour requirement, academic classification, and pre-college

standardized test score made significant contributions to the prediction equation.

Participation in a revenue-generating sport was found to significantly impact GPA.

Collegiate Student-Athletes' Academic Success: Academic Communication
Apprehension's Impact on Prediction Models

by

Kai'Iah A. James, B.A., M.A.

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Eric L. Robinson, Ph.D., Interim Chairperson

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Approved by the Dissertation Committee

Eric L. Robinson, Ph.D., Chairperson

Julie K. Ivey, Ph.D.

Janet H. Bagby, Ph.D.

Lucy Barnard-Brak, Ph.D.

Karla Leeper, Ph.D.

Ian McCaw, B.A., M.S.

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J. Larry Lyon, Ph.D., Dean

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DEDICATION

To my Heavenly Father

My beautiful husband, Odell

and our precious Alexis, Gabrielle, and Solomon

Who have supported me throughout this journey

“For I am persuaded, that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come. Nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord.”

Romans 8:38-39

CHAPTER ONE

Introduction

According to Bowen, Chingos, and McPherson (2009) American four-year universities are graduating less than 60% of their students over a five-year period. This phenomenon is occurring despite greater access to institutions, increased options for financing education, and a long line of research investigating the best predictors and factors for retention of college students (Jaeger, 2001; Kirby, White, & Aruguete, 2007; Mannan, 2007; Martinez, Sher, Krull, & Wood, 2009; Mathews, 2007; Rayle, Kurpius, & Arredondo, 2006; Rodriguez, 1996; Strayhorn, 2008; Swart, 1996). In an attempt to admit students who can successfully matriculate, historically, colleges have required high school GPA and scores from nationally standardized tests such as the American College Test (ACT) and the Scholastic Aptitude Test (SAT). The conventional wisdom is that precollege performance provided a solid measure of predicting academic success in college (Hill, 1999). Although researchers have continued to find a strong correlation between these measures and college GPA (Paulos), in the wake of stubbornly low graduation rates, some researchers (Jaeger; Mannan; Rodriguez; Swart) have concluded that these traditional variables alone are inadequate in predicting the success of students, particularly for particular subpopulations of collegiate undergraduates (e.g., females, international students, minorities, African-American males, and first-generation college students) (Kirby, White, & Aruguete; Martinez, Sher, Krull, & Wood; Mathews; Rayle, Kurpius, & Arredondo; Strayhorn). The factors influencing the academic performance of

one specific and high profile subpopulation of students on campus is the subject of this study—student-athletes.

College Athletics and Academics

Student-athletes are individuals who matriculate at universities while at the same time representing their academic institution in sanctioned sports competitions against students from other universities. The competitions are sanctioned through these universities' "voluntary membership" in an ancillary regulatory body (NCAA, 2008). Much like the Boards of Regents and accreditation agencies that oversee institutions, college athletics is, as Bowen and Levin (2003) argue, so rooted in American higher education that it has a well-known governing body, the National Collegiate Athletic Association (NCAA). Made up of three divisions (I, II, and III), the NCAA regulates not only athletic competitions, but also the academic eligibility of participating institutions' student-athletes, reserving the most stringent standards for institutions in the most visible NCAA division (Division IA or Football Bowl Subdivision) (Denhart, Villowock & Vedder, 2009). This uniquely intertwined relationship between sports and academics on college campuses, has caused some to refer to college and university athletics as "American higher education's *peculiar institution*, [in that] their presence is pervasive, yet their proper balance with academics remains puzzling" (Thelin, 1994).

Historically, student-athletes have been linked to poor academic performance both prior to and during college (Bowen & Levin, 2003; Covell & Barr, 2001; Cross, 1973; Gaston-Gayles & Hu, 2009; Harrison, 1976; Heydorn, 2009; Lapchick, 2006; Nyquist, 1979; Sack & Thiel, 1979; Watt & Moore, 2001). Critics (Beneford, 2007; Bowen & Levin; Lapchick; Sperber, 1990, 2000) have accused institutions of exploiting student-

athletes by using their athletic ability to further the “commercialization” of college athletics at the expense of providing them a meaningful and quality academic experience.

Sperber (1990) argued that

athletes are the only group of students recruited for commercial entertainment purposes—not academic reasons, and if the student-athlete fails to keep his part of the contract or is not producing athletically, [irrespective of his academic performance], the athletics department can choose not to renew the scholarship. (p. K2)

Criticisms

As college athletic programs, estimated to be a \$60 billion industry (Ifill, 2001), have become more competitive, concerns have grown that institutions’ commitment to the academic experience and success of athletes has become misplaced (Benford, 2007; Bowen & Levin, 2003; Gaston-Gayles & Hu, 2009; Sharp & Sheilley, 2008; Sperber, 1990, 2000). To bolster their concerns, critics (e.g., Kissinger & Miller, 2009; Watt & Moore, 2001) point to universities’ increased dependence on the attention to their institutions gained by televised college sports contests to increase enrollment and enhance their image, juxtaposed to historically lower graduation rates and academic performance for student-athletes when compared to the general student population (Gaston-Gayles & Hu, 2009; Heydorn, 2009).

In fact, this lower graduation rate has been problematic for years in colleges and universities, especially at the NCAA Division I level (Bowen & Levin, 2003) and most notably for athletes in revenue-generating sports (football and basketball) (Gaston-Gayles & Hu, 2009). Watt and Moore (2001) as well as Gaston-Gayles and Hu found an added variable of underperformance by race. For instance, in 2004 the NCAA reported that for a six-year cohort at the Division IA level, 65% of Caucasian football student-athletes

graduated, as did 48% of their basketball counterparts; whereas, only 48% of African American football players and 42% of African American basketball players received degrees (Matheson, 2007). In addition, two-thirds of the participants in the 2005 NCAA Division I Men's Basketball Championship Tournament (representing 65 universities) graduated less than 50% of their players and some programs graduated none at all (Matheson). In an attempt to address the academic plight of student-athletes and as Lapchick (2006) argued to stave off criticisms, the NCAA has passed several legislative measures over the decades that have been designed to address academic eligibility for student-athletes.

NCAA Legislation

APR. Currently, eligibility standards for student-athletes and institutions are assessed by the NCAA's (2004) Academic Progress Rate (APR) that was implemented in 2004. This statute, also referred to as a continuing eligibility mandate or the 40-60-80 rule, requires student-athletes to complete 40%, 60%, and 80% of a declared major, by the end of their second, third, and fourth years, respectively. While this legislation appears to answer the criticisms of low graduation rates, it appears to have resulted in an unintended consequence: student-athletes are funneled and "clustered" into easy majors with favorable professors in order to maintain eligibility under the new APR statute (McCormick & McCormick, 2006; Sharp & Sheilly, 2008). The APR, like its predecessor Proposition 48, which initiated much of the research in student-athlete academic success, has led to an increased focus on factors that predict academic success for student-athletes.

Proposition 48. In 1983 the NCAA passed academic legislation known as Proposition 48 (it became NCAA Bylaw 5-1-J, effective August 1986). The legislation required incoming freshmen to have received a minimum score of 15 on the ACT or 700 on the SAT and to have earned a 2.0 high school grade point average in at least 11 “core” or academic courses (English, Social Sciences, Physical Science, and Math) (Jesudason, 1989). This legislation was designed to address student-athletes’ poor academic performance, and to strengthen eligibility standards with the goal of providing institutions with student-athletes who had a greater opportunity to successfully matriculate (Heck & Takahashi, 2006). Yet, this legislation’s reliance on precollege variables (high school grade point average in core academic courses and a minimum or “cut score” achieved on SAT/ACT), as well as the penalty of the loss of one athletic eligibility year for failure to meet the requirements, resulted in fears of disproportionality for some subgroups (e.g., African American students) of student-athletes who had traditionally not performed well on the exams (Covell & Barr, 2001).

Predicting Student-Athlete Academic Success

Cognitive Variables

This concern generated research (Alexander, 1983; Baumann & Henschen, 1986; Hargadon, 1984; Lang, Dunham, & Alpert, 1988; Sedlacek & Adams-Gaston, 1992; Sellers, 1992) about the predictive ability of these traditional variables (high school GPA, SAT/ACT score), referred to as *cognitive variables*, for student-athletes (Covell & Barr, 2001; Morgan, 2005). For example, Sellers found that various precollege variables (i.e., parent’s occupation, high school GPA, and student’s SAT) predicted academic

performance differently for different subpopulations of student-athletes. High school GPA, SAT score, and socioeconomic status predicted collegiate academic performance for Caucasian student-athletes; whereas, mother's occupation and high school GPA were the only significant predictors for African American football and basketball players (Sellers). Further investigations (Baumann & Henschen, 1986; Carodine, Murphey, Orbach, Rulka, Frehlich, & Barba, 1999; Ervin, Saunders, Gillis, & Hogrebe, 1985; McArdle & Hamagami, 1994; Cook & Mottley, 1984; Sedlacek & Adams-Gaston) found that variables, other than the traditional cognitive variables (i.e., precollege academic performance and demographic variables), such as self-concept and support, more accurately predicted student-athlete academic performance. Although some would argue that the new variables could possess an element of a cognitive nature, currently the literature refers to non-traditional variables as non-cognitive or environmental variables (Carodine et al., 1999; Comeaux, 2005; Sedlacek & Adams-Gaston).

Non-cognitive Variables

Dissatisfaction with traditional measures' ability to predict academic success led to further examinations of non-cognitive predictor variables and resulted in conclusions by some researchers (Birky, 2007; Carodine, Almond, & Gratto, 2001; Sedlacek & Adams-Gaston, 1992) that participation in intercollegiate athletics creates such a distinctive social and academic experience that when examining predictors of success for student-athletes, researchers should consider unique factors. These factors include expectations and experiences related to the admissions process during recruiting (Kissinger & Miller, 2009), early arrival (in summer or Spring semester of senior year in high school) on campus for participation in pre-season intense physical conditioning

(McCormick & McCormick, 2006; O’Mealey & Mahoney, 2009), academic continuing eligibility standards mandated by the NCAA (2004), clustering student-athletes in specific classes and academic majors (Brady, 2008; Fountain & Finley, 2009), and navigating the spotlight of the media (Stansbury, 2004).

Parham (1993) argued that these demands in both sport and the classroom require that the student-athlete manage two roles (student and athlete) that are often in conflict. Killeya-Jones (2005) and Simons and Rheenen (2000) investigated the implications of these dual roles in selecting their non-cognitive predictor variable of academic performance for student-athletes. Specifically, Killeya-Jones and Gaston-Gayles (2004) found academic motivation versus athletic motivation and commitment to the student role as the most important in positive academic outcomes.

Despite a handful of studies that identified non-cognitive variables impacting the student-athlete academic experience, Comeaux (2005) noted that very few studies have investigated the life or environmental factors that influence the academic success of the student-athlete while on campus. In other words, few studies seemed to provide a predictor variable that would account for the unique experience of student-athletes, while at the same time addressing the on-campus implications. In an attempt to fill this gap in the literature, Comeaux added the environmental or non-cognitive factor *of interaction with faculty* as a predictor of college GPA for his sample of 459 African American and Caucasian football and male basketball student-athletes. With data gathered from the Cooperative Institutional Research Program’s 4-year longitudinal survey, Comeaux found that along with traditional variables (high school GPA, SAT Verbal), faculty/student interaction strongly predicted student-athlete performance.

The Comeaux (2005) study provided a non-cognitive variable that addressed the student role on campus and added important information to the body of literature by emphasizing the significance of research investigating on-campus academic impacts for collegiate student-athletes. However, the selected variable (amount of faculty/student interaction) does not appear to account for the prior literature including the life experiences and stress created from sustaining dual identities and expectations that impact the student-athlete. It is possible that the academic prediction model still needs a non-cognitive variable that accounts for the unique experience of the student-athlete and impacts his/her on-campus experience.

Purpose of the Study

This study attempts to add to the body of literature by investigating academic communication apprehension as an environmental factor that might account for student-athletes' unique experience and impact their ability and/or willingness to fully engage in the classroom experience, potentially impacting their academic performance.

Communication Apprehension

McCroskey (1977) defines Communication Apprehension (CA) as an “individual’s fear or anxiety related to a real or anticipated need to communicate with another person or persons” (p. 78). McCroskey (1982) divided communication apprehension (or anxiety) into four subgroups: 1) Trait anxiety (function of personality), 2) Generalized Contexts anxiety (anxiety in certain settings, i.e., academic classroom), 3) Generalized People anxiety (anxiety only with certain people, i.e., professors or other students in class), and 4) and State Anxiety (anxiety only in certain circumstance, i.e.

giving academic presentations or talking with professors about grades). For collegiate student-athletes, given their unique experiences and expectations as a result of participation in athletics (Le Crom, Warren, Clark, Marolla, & Gerber, 2009), this phenomenon of anxiety or fear response to real or anticipated communication (communication apprehension) when interacting in an academic setting seems logical and could pose real problems, such as failure to interact with faculty and non-student-athletes in class, as well as heightened anxiety when giving in-class academic presentations. Bourhis, Allen, and Bauman (2006) found a significant negative correlation between cognition and anxiety, and argued that since the finding established a connection between the psychological and behavioral, communication apprehension is a valid measure.

Investigation of this variable's impact is essential as communication apprehension in the academic setting (academic communication apprehension or anxiety) may lead to underperformance in the classroom because of the behaviors (withdrawal from or avoidance of communication or excessive communication) it reportedly produces (McCroskey & McCroskey, 2002). This non-cognitive or environment variable of academic communication apprehension, like social support, motivation, and self-perception previously discussed, has been linked to academic performance and should, therefore, along with traditional measures be introduced into the prediction model, and investigated as a possible explanation for variance in academic grade point average among student-athletes.

The Problem

Although graduation rates of student-athletes are improving and in fact have eclipsed their non-athlete counterparts (Fountain & Finley, 2009), critics' arguments have increased that many athletes are not having to work hard to earn grades and are clustered into classes and matriculate with easy majors (Brady, 2008; Denhart, Villwock, & Vedder, 2009; Fountain & Finley; Knobler, 2007). In addition, while graduation rates for student-athletes as a whole have increased, subpopulations, such as African American male student-athletes and student-athletes participating in revenue-generating sports are still well below their Caucasian student-athlete counterparts and those in non-revenue-generating sports (Fountain & Finley). As NCAA legislation has historically responded to substantive outcries, reasonably, they will respond to these complaints. Therefore, research investigating the on-campus academic experience and possible impacts to academic performance are essential.

While the Comeaux (2005) study and others (e.g., Gaston-Gayles & Hu, 2009) have pointed to the importance of investigating faculty/student-athlete interaction among other variables that impact the cognitive and affective outcomes for student-athletes, little research if any has introduced a variable that seems to account for both the unique life experience and the environmental factors that impact the student-athlete's academic success on campus.

Research Questions

The study seeks to answer the following questions:

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race, and sport classification?

CHAPTER TWO

Review of the Literature

The review of literature addressed four main areas: 1) major NCAA academic legislation that prompted research in predicting student-athlete academic success, 2) literature that has investigated cognitive and non-cognitive variables' ability predict to student-athlete academic performance, 3) the unique experiences and expectations of student-athletes that must be considered when selecting non-cognitive predictor variables for investigation, and 4) communication apprehension as a potential predictor variable.

NCAA Academic Legislation

In 1965 the NCAA passed its first academic eligibility mandate (NCAA, 1965) in an attempt to address criticisms (Lapchick, 2006) about the poor academic performance of student-athletes on college campuses. The new '1.600 rule' stipulated that incoming student-athletes' predicted minimum college grade point average (GPA) must reach 1.6 or higher and was amended to 2.0 in 1973 (NCAA, 1973). Yet, research continued to show that student-athletes grossly underperformed in the classroom when compared to their non-student-athlete counterparts on campus (Cross, 1973; Harrison, 1976; Nyquist, 1979; Sack & Thiel, 1979). Further, investigations showed that black student-athletes were faring the worst; for example, Sperber (1990) noted that the men's basketball team at Memphis State University – a team composed of predominantly black student-athletes, did not graduate a single black player between 1972 and 1985.

In the early 1980s college presidents, administrators, and professors became increasingly concerned with what they felt was the exploitation of student-athletes, especially with those participating in football and basketball. Their concerns were supported by highly publicized examples, including one student-athlete leaving a distinguished university after a four-year football career without being able to read (Krehbiel, 1998) and reports that during the previous decade, the University of Georgia had graduated only 4% of its African American basketball players and just 17% of its African American football players (Howard, 1986-1987). During this time, the NCAA conducted a five-year study on graduate rates, and found that only 42.9% of Division 1A football student-athletes graduated (Covell & Barr, 2001). The new legislation appeared ineffective and pressure increased for the NCAA to reform its academic eligibility standards (Crowley, 2006).

Proposition 48

In 1983 the NCAA responded to concerns about the plight of the student-athlete with new legislation known as Proposition 48 (it became NCAA Bylaw 5-1-J, effective August 1986) and refocused the organization to emphasize the educational achievement of collegiate student-athletes (Covell & Barr, 2001; Jesudason, 1989). Proposition 48 was designed to raise student-athlete graduation rates, alleviate academic institution criticism, and to strengthen academic standards for student-athletes; yet, it also resulted in controversy (Heck & Takahashi, 2006). The new rule required incoming freshman to have achieved a minimum score (cut score) on one of the two standard college entrance examinations (SAT-700; ACT-15) and a 2.0 or greater high school GPA in not less than 11 “core” or academic high school courses (Jesudason) (e.g., English, Math, Social

Science, and Physical Science). Student-athletes that did not meet these criteria could receive an athletic scholarship, but would not be eligible to play as a freshman and were, thus, eligible to participate only three years instead of four (Jesudason).

Critics, such as Gregory Anrig, the president of Educational Testing Service (which administers college entrance exams) at the time of Proposition 48's introduction, contended that the new "cut off score" legislation lacked scientific validity (The National Center for Fair and Open Testing, 2007), in addition to disproportionately penalizing African American students (Covell & Barr, 2001) because of its reliance on standardized test scores. These concerns aligned with the National Collegiate Athletic Association's (2006) own studies, which revealed a significant disparity between the standardized test scores of black and white student-athletes. Morgan (2005) argued that Proposition 48 made prospective athletes (prospects) that did not meet the academic criteria less attractive to athletic programs based on the premise that high school scores predicted collegiate academic success. In effect, Proposition 48 assumed that precollege, traditional variables accurately predict college performance, and do so uniformly well for all types of sub-groups of student athletes (Morgan) (e.g., males vs. females, minorities vs. non-minorities, revenue vs. non-revenue-generating sports). These issues birthed research that examined the impact and predictive ability of cognitive variables on student-athlete academic performance.

Predicting Student-Athlete Academic Success

Traditional versus Non-Cognitive Variables

In order to predict academic success, most universities have traditionally used high school GPA and scores from national tests such as the SAT and ACT as critical criteria (Geiser & Studley, 2002; Hill, 1999). However because of the implications for athletic eligibility, this tradition with respect to student-athletes has fostered controversy (Covell & Barr, 2001), and generated questions (Morgan, 2005) concerning their accurate and uniform predictive ability for academic performance of various subgroups of student-athletes (e.g., males vs. females, minorities vs. non-minorities; revenue vs. non-revenue generating sports).

For example, Sellers (1992), in response to Proposition 48, found that mother's occupation and high school GPA were the only significant predictors of college GPA for black male student-athletes who participated in football and basketball, whereas socio-economic status, high school GPA, and SAT scores were significant in predicting college GPA for white student-athletes. These results confirmed other studies' findings that a variety of precollege variables predicted college GPA differently for subgroups of student-athletes, based on race, gender, and sport classification (Alexander, 1983; Baumann & Henschen, 1986; Hargadon, 1984; Lang, Dunham, & Alpert, 1988; Sedlacek & Adams-Gaston, 1992; Young & Sowa, 1992).

As researchers investigated Proposition 48's selected variables' ability to predict college graduation, they found non-cognitive variables provided a better predictor for student-athlete success than the traditional variables (Baumann & Henschen, 1986; Carodine et al., 1999; Ervin et al., 1985; McArdle & Hamagami, 1994; NCAA, 1984;

Sedlacek & Adams-Gaston, 1992). For example, Sedlacek and Adams-Gaston found that for their sample of 105 freshmen student-athletes, SAT scores were a weak indicator of academic performance, but rather non-cognitive variables, particularly self-concept and support systems, provided a better way to predict student-athlete success. In addition, these researchers offered a new perspective in that for seemingly the first time in the literature, Sedlacek and Adams-Gaston suggested that the collegiate athlete experience was so unique that it should be considered in the research.

Likewise, Carodine, Almond, and Gratto (2001) argued that like other students, “student athletes face the challenge of mastering cognitive and psychosocial developmental tasks” (p. 20), such as self-esteem and relationship development, decisions about careers, and self-identity and values, yet their circumstance is unique because of the additional experiences and the expectations (LeCrom et al., 2009; Sedlacek & Adams-Gaston, 1992) of participation in intercollegiate athletics.

Summary of NCAA Legislation and Subsequent Research

In summary, in an effort to establish the best predictors for students’ academic success in college, researchers have examined a variety of traditional and non-cognitive variables. These investigations have led to research on the impact of different variables for various subpopulations of students on-campus. The variables for one such subpopulation, student-athletes, have been extensively investigated for a number of reasons. Along with the financial success and high visibility of athletic programs, particularly football and basketball, have come criticisms that institutions’ and the NCAA’s commitment to the academic performance of its student-athletes has become secondary to its educational mission. The NCAA has responded with legislation it hoped

would provide a standard for predicting student-athletes' success in the classroom. However, researchers have found that some of these attempts (e.g., Proposition 48) have been rooted only in a commitment to precollege performance. Further, these measures have failed to provide a quality prediction tool for student-athletes because they fail to account for the non-cognitive variables that impact student success. Researchers have thus attempted to identify and examine a host of non-cognitive variables that could potentially impact the academic experience and performance of student-athletes.

In attempting to identify such variables for investigation in academic prediction models, Birky (2007), in addition to others (e.g., LeCrom et al., 2009; Sedlacek & Adams-Gaston, 1992) have argued that the student-athlete experience creates unique issues and demands, so any selected non-cognitive variable should account for these experiences and expectations. In other words, participation in intercollegiate athletics seems to result in such a distinctive social and academic experience that when investigating the academic success of student-athletes, it is important for researchers to account for the multiple characteristics that make them unique on college campuses.

Considering the Uniqueness of the Student-Athlete

There are several attributes and experiences of the student-athlete at the NCAA Division I level that make him or her part of a unique sub-population on a college campus revolving around entering campus, the classroom experience, and the social on and off campus experience (Birky, 2007; LeCrom et al., 2009). For purposes of this study with Division I participants, college students who represented their institutions of higher education by competing athletically against other schools in NCAA sanctioned contests were referred to as *student-athletes*. There were two types of student-athletes:

scholarship and non-scholarship. Athletes that receive any amount of financial assistance from the university based on athletic ability alone were referred to as scholarship student-athletes, while athletes that receive no financial assistance but participate in an NCAA sanctioned sport were referred to as non-scholarship athletes (also known as “walk-ons athletes”).

Expectations and Experiences of Student Athletes

The following section discusses several of the unique experiences and expectations of the student-athlete at the NCAA Division I level that should be considered when selecting non-cognitive variables to investigate in academic prediction models for these students. These experiences and expectations can be divided into two categories: formal and informal, with a mixture of each within each category.

Recruiting (Experience)

From a formal (institutional) perspective, all potential student-athletes (prospects) are funneled through the NCAA Initial Eligibility Center (formerly The NCAA Clearinghouse) (NCAA, 2008) in order to determine whether they meet minimum guidelines for acceptance to college. Unlike the general prospective student that applies directly to his or her colleges of choice, prospective student-athletes must have their high school GPA (in core courses) and SAT/ACT scores officially sent first to the Initial Eligibility Center of The Clearinghouse who determines the student-athlete’s academic eligibility and must then “certify” the prospect (Hill, 1999) prior to being accepted at any NCAA Division I school (NCAA, 2008). Though the NCAA designed this certification step to ensure the integrity of student-athletes’ high school academic records and their

eligibility to play college sports, researchers (Bruno, Holland, & Ward, 1988; Eitzen, 2000; Shulman & Bowen, 2001; Stuart, 1985) report that many athletes that participate in NCAA Division I athletics come to universities with significantly lower average standardized college entrance exam scores and generally significantly lower high school grade point averages than their non-athlete counterparts (Bruno, Holland, & Ward; Stuart).

Kissinger and Miller (2009) noted that scholarships (including full and partial) worth more than \$1 billion dollars are funding over 126,000 students for their athletic participation in a multi-billion dollar “business,” irrespective of their academic prowess. The competition at the NCAA Division I level for these athletes, especially in high profile sports such as football and basketball is intense (Sulentic, 2009). So intense, that there are strict guidelines regulating the process (NCAA Bylaw 13.1) (NCAA, 2008), and even websites and companies, such as Rivals.com (2009), that are solely devoted to college recruiting. These organizations rank players, compose and post stories about their visits to campus, and closely follow their “decision” (Rivals.com). Kissinger and Miller note that the pressure generated from the recruiting process can only be understood by other athletes because the experience is so unique. For example, in testimony before the Knight Foundation Commission on Intercollegiate Athletics (2006), Myron Rolle, a highly recruited football player who eventually enrolled at Florida State, stated:

I got to meet President T. K. Wetherell, I got a text message from Governor Jeb Bush on my visit to Florida State. I met the president of Florida, Mr. Maben; I met David Boren; the president of Oklahoma; Barry Switzer, Jimmy Johnson. I mean Warren Sapp happened to be in the same room I was in when I walked into Miami. Emmitt Smith was around the corner when I walked through Florida. You know just the amount of attention I got and the different things that happened

to me on these recruiting visits just to pique my interest and get me to like this school even was just incredible. (Kissinger & Miller, p. 41)

The final college choice for these teenage high profile athletes is often communicated on national television (Drummond, Lynch, & Platania, 2008). Although high school students that are academically-gifted are heavily recruited, the experience for collegiate student-athletes is so unique that in 2004 the United States House of Representatives Subcommittee on Commerce, Trade, and Consumer Protection conducted special proceedings to discuss allegations of abuses during the recruiting process (Lawrence, Merckx, & Hebert, 2008).

In essence, required only to meet *minimum* academic standards (Hill, 1999), student-athletes enter college at an academic disadvantage with their counterparts (Carodine, Almond, & Gratto, 2001) and with a focus on their role as an athlete due to this emphasis during the recruiting process. As Sperber (1990) noted, “athletes are the only group of students recruited for commercial entertainment purposes—not for academic reasons. . .” (p. K2). These factors combined potentially set up a discomfort with their student role.

Arrival On-campus

Following an atypical introduction, through the recruiting process and application to the university by way of the NCAA Clearinghouse, another expectation of student-athletes is that these individuals are formally expected to arrive to campus several weeks before non-student-athletes (McCormick & McCormick, 2006). This is especially true for student-athletes that participate in fall sports such as football, women’s soccer, cross country, fall track and field, and women’s volleyball. Just recently, college athletics,

primarily Division IA football, is experiencing a wave of student-athletes graduating from high school in December of their senior year and beginning college in January in order to participate in spring training workouts with the team (O’Mealey & Mahoney, 2009). Whether in August or December, early campus arrival provides student-athletes an opportunity to focus on team-building, conditioning, and preparation for their sport. Competition often begins the first week of school if not sooner.

While pre-season training helps student-athletes to become socially well-acquainted with their teammates and coaches, as well as provides structure through practice schedules and workout requirements, it provides relatively no time to participate in traditional freshman acclimation activities, such as general student orientation and other traditional campus activities (Etzel, Watson, Visek, & Maniar, 2006). Spanning more than 100 years, universities have offered freshman orientation programs and activities, including informal meetings with university professors, designed “to help students adjust to the college environment through a variety of human support and physical resources available on campus” (Daddona & Cooper, 2002, p. 301), and to facilitate the student’s successful assimilation into a new and unusual academic and social situation (Bell, 2006; Pascarella, Terenzini, & Wolfe, 1986). Student-athletes, who participate in a similar *socialization* process for their athlete role during pre-season training, seemingly miss an opportunity to integrate into their academic role like their regular-student counterparts (Etzel et al.). Bell (2006) noted the impact on persistence, grade point average, and psychological connectedness to the institution that these orientation programs provide. Astin (1996) found in his review of 20 years worth of longitudinal data, that “involvement with academics, faculty, and student peers are the

most potent forms of positive involvement, while noninvolvement with campus life has a powerful negative impact on student outcomes” (as cited in Wolcott & Gore-Mann, 2009, p. 1). In addition, Carodine, Almond, and Gratto (2001) noted that the disconnection to the traditional college campus has the potential to result in a negative experience for the student-athlete and potentially sets up an initial imbalance of comfort and commitment to the development of their role as a student versus their role as an athlete.

Classroom Experience

Clustering. Another unique encounter for student-athletes is the classroom experience. Unlike the typical student who must learn to navigate the university registration system and register for classes that fulfill their major and interests, the student-athlete schedule is strategically designed to accommodate practice schedules, the in-season demands of travel to athletic events (Curtis, 2006), and NCAA academic eligibility standards. As a result of these constraints, researchers have argued that student-athletes are often placed or *clustered* in the same classes with *favorable professors* and steered toward certain majors (Brady, 2008; Fountain & Finley, 2009; Knobler, 2007). With noted examples of clustering (Denhart, Villowock & Vedder, 2009; Fountain & Finley), student-athletes often find themselves in classes with groups of other student-athletes and typically from the same team. Gaston-Gayles and Hu (2009) argued that like any other student, the natural comfort level is to sit by, study with, and to communicate with the students in the class most like themselves. As a result of the common practice of clustering (Fountain & Finley), student-athletes are able to find others in class who similarly share the demands of intercollegiate athletic participation.

Gaston-Gayles and Hu found that this practice of educationally purposeful disengagement was significant for males in high profile sports.

Academic progress rate (APR). A second institutional constraint unique to student-athletes at the NCAA Division I level is the continuing eligibility or progress toward degree requirement, mandated through the passage of the APR legislation (NCAA, 2004). The NCAA implemented the Academic Performance Rate (APR) statute in 2004 which mandated, student-athletes must complete a percentage of academic hours in their declared major by the end of each year (40% at the end of second year; 60% at the end of third year; 80% at the end of fourth year). Further, the legislation levies sanctions upon both student-athletes and their institutions with loss of scholarships and potential termination of its athletic programs for failure to meet the standards (NCAA, 2004). In addition, to maintain NCAA eligibility, student-athletes must carry a full course load, even during in-season play of at least 12 credit hours, but routinely 15 (Meyer, 2005). No other student on campus is faced with a situation where they have to complete this percentage of course-work in order to remain a student. While this requirement may appear to answer criticisms of exploitation, some (McCormick & McCormick, 2006; Sharp & Sheilley, 2008) have argued that the unique ruling pressures the student-athlete to remain in a major although dissatisfied with it, pressures or results in institutions steering student-athletes into *easy majors* comprised of courses with multiple electives and penalizes transfer students, all in consideration of his or her athletic eligibility status versus academic experience.

Study Time

Another unique aspect of the life of the student-athlete revolves around study time. Most NCAA Division I institutions have athletic study halls. Study hall is a facility designed specifically for student-athletes to complete their homework, meet with tutors and academic counselors, and assist on projects (Stephen & Higgins, 2009). Depending on the institution, these facilities can range in the millions of dollars for construction and offer premier services, atmosphere, and technology. For example, in January 2006, the University of Michigan (2009) opened its \$12 million, 38,000 square foot *Stephen M. Ross Academic Center*, which houses its academic support program for the University's 700 student-athletes. The center is staffed with 10 full-time members to serve the academic and social needs of their student-athletes. Division I institutions have full-time academic advisors designated for athletics, often assigned to specific sports as well as numerous part-time employees dedicated to the tutoring, monitoring, and scheduling work of and for the student-athletes (Sperber, 2000). Student-athlete academic centers seem to provide a much needed service in that it targets and addresses these students' unique circumstances and the demands of their busy schedules, yet it highlights one more area of isolation from the regular-student peer group—study-time (Stephen & Higgins, 2009).

Even while these elaborate centers provide services designed specifically to accommodate and to support the unique schedule and demands of student-athletes, the time-commitment intercollegiate sport participation requires makes finding study time quite difficult. McCormick and McCormick (2006) found that during the week of a home football game, a student-athlete would devote approximately 53 hours to athletic

commitments, including practice, game play, mandatory training table (eating), and secluded team time prior to competition. This *conservative* time estimate (McCormick & McCormick) does not account for class attendance, study, or appointments with professors to discuss course material. Gaston-Gayles and Hu (2009) like Rolo and Gould (2007) found that this pressure to perform academically and athletically under extreme or at minimum atypical circumstances causes increased distress for the student-athlete in their quest to meet role expectations as both student and athlete.

Room and Board

Housing. The social isolation found in the classroom and during study-time, also seems to exist in the student-athlete's living situation. While the NCAA disbanded the use of athletic dorms in 1991 in an effort to address growing concerns about student-athlete isolation (Gerdy, 2006), student-athlete isolated housing often occurs in an informal manner. It is common for student-athletes to live in close proximity to each other, whether in dorms or in on-campus apartments (Jolly, 2008).

Dining. Another form of isolation that may lead to social anxiety relates to dining. Most NCAA Division I institutions have athletic dining facilities or training tables (Sperber, 1990). For example, the University of Oklahoma's Wagner Dining Hall webpage (SoonerSports, 2009) reports that it "serves all resident student-athletes" (p. 1), and that the hours of operation accommodate "the demands of a student-athlete's busy schedule" (p. 1). Thus, it appears that the social isolation of the student-athlete occurs in a number of venues, including study-time, housing, and dining.

Summer Schedule

Another informal guideline that can lead to social isolation involves the student-athlete's summer schedule. After the regular academic calendar (i.e., fall and spring semesters), student-athletes are often still on-campus, for volunteer workouts, another informal expectation often incurred by student-athletes. Although, the NCAA limits the number of practices and length of practices for each sport (Gaston-Gayles & Hu, 2009; Wolverton, 2008), as well as provides guidance on formal off-season practices, as McCormick and McCormick (2006) found, off-season workouts, while presented as *voluntary* are often strongly encouraged by coaching staffs. These voluntary workout sessions, often occurring before and after summer classes, include one to two hours of vigorous cardiovascular training, running and agility drills, and intense weight lifting (McCormick & McCormick). Since the summer is *off-season* for every collegiate sport, it is common to find student-athletes participating in an organized exercise program coordinated by their team's strength coach. This can be beneficial to student-athletes in that it helps keep them in physical shape for the demands of their sports, while also providing them the opportunity to take summer classes to catch up on progress toward graduation hours required by the NCAA (Finley, 2009). Without a break in extreme training, managing the demands of full-time college course work and study in addition to common social issues, life can prove quite stressful for the student-athlete (McCormick & McCormick; Wolverton).

Media Coverage

Another experience unique to student-athletes is media coverage of not only their sports-related endeavors, but also coverage of their off-the-field activities. For example,

on August 31, 2007, local, statewide, and national newspaper, television, and web-based media outlets reported that Oklahoma University freshman Ryan Broyles had been arrested and charged with larceny for stealing gas (Shinn, 2007). According to the Oklahoma State Bureau of Investigation (2007), 79,989 cases of larceny had occurred that year. What made this case so different? Broyles, a former Norman (OK) High School student, was slated to play in the next day's game at wide receiver as a true freshman for the Oklahoma Sooners football team (Shinn). At the other extreme, on November 22, 2008, media outlets (Dinich, 2008) reported that Myron Rolle, an all-conference defensive back for Florida State University's football team had been named a Rhodes Scholar. Each year 32 students from across the United States receive the most prestigious academic honor, bestowed by the Rhodes Trust, which affords them the opportunity to study at England's Oxford University (Office of the American Secretary, 2009). Why did media choose to cover Rolle's story? He was a star football player whose interview with the prestigious panel conflicted with a major conference game. After completing interviews with the Rhodes Scholar panel and winning the scholarship around 5 p.m., Myron Rolle received a police escort to a local airport, boarded a private plane at 6 p.m. from Alabama to Maryland, and joined his Florida State Seminole football team in an Atlantic Coast Conference (ACC) game against the University of Maryland's Terrapins (Dinich) with bowl game and conference title implications. The starting safety and newly crowned Rhodes Scholar arrived shortly before half-time during the televised game and took the field to a stadium full of cheering fans, players, and coaches who were already aware that he had won the scholarship and game commentators who informed the viewers of his honor. Student-athletes are aware that,

unlike their non-athlete counterparts, they act under the watchful eye of the media, facing the “formidable task of choosing the behaviors and attitudes that will form the basis of their media image, while also trying to perform the roles of student and athlete” (Hill, Burch-Ragan, & Yates, 2001, p. 71). As seen by the two previous examples, this has positive and negative implications. For Ryan Broyles, the media coverage worked against him in that a story about a teenager attempting to steal gasoline is typically not newsworthy, unless you are a high-profile student-athlete. As for Myron Rolle, his status as an exceptional student and exceptional athlete brought a unique and positive story to his experience. Either way, the added stress from the high-visibility on and off campus through the media has been linked to significant academic performance impacts (Stansbury, 2004).

Summary of Student-Athlete Experience and Expectations

In summary, the formal and informal expectations and experiences of student-athletes ranging from recruiting to academic study, dictated by participation in college athletics, shape the academic arrival and matriculation, as well as the social and psychological experience of the student-athlete. They require that student-athletes consistently and simultaneously manage dual roles—student and athlete. The pressure, of subsuming these dual roles (student and athlete), requires that the student-athlete answer to many more stakeholders than the traditional student, shoulder the responsibility that comes with participating in generating revenue for the university, all while attending to their academic responsibilities (Parham, 1993). Therefore, in the continued effort to investigate the factors that impact the academic success of student-athletes, researchers

should account for the impact of the dual demands of athletics and academics on student-athletes when selecting non-cognitive predictor variables.

Impact of Dual Roles

Simons and Van Rheenen (2000) acknowledged this idea of the distinct experience of the student-athlete in their investigation of 200 Division I athletes, when selecting their non-cognitive variables (achievement commitment, and the balance of academic and athletic identities). The researchers (Simons and Van Rheenen) found that similar to prior findings (Baumann & Henschen, 1986; Carodine et al., 1999; Ervin et al., 1985; McArdle & Hamagami, 1994; NCAA, 1984; Sedlacek & Adams-Gaston, 1992), traditional precollege scores only marginally predicted academic success; whereas, their chosen non-cognitive variables (achievement commitment, and the balance of academic and athletic identities) provided a strong measure for predicting college grade point average. In fact, “the strong, independent predictive value of athletic-academic commitment and achievement motivation, so strongly related to academic performance” (p. 177) that Simons and Van Rheenen (2000) argued a core problem existed at universities: helping student-athletes strike a balance between their academic and athletic demands that are often in conflict.

In addition, Killeya-Jones (2005) examined the potential for role conflict and its impact on the academic experience of student-athletes. Killeya-Jones argued that, as previously discussed, student-athletes hold two roles (student and athlete) that both come with demands of time and psychological commitment, and failure to perform in either role will have consequences for their existence in the other role. Killeya-Jones took an

Identity Discrepancy approach in examining the results of potential conflicts that could arise in the attempt to balance these roles.

The Identity-Discrepancy Theory asserts that one can have multiple identities and they can co-exist harmoniously if the individual identifies strongly with each (Killeya-Jones, 2005). Problems can occur when an individual over-identifies with one role while neglecting to develop the other, especially when the person is forced to identify with both; thus, the discrepancy. Killeya-Jones also argued that should a student-athlete experience psychological discomfort in his/her role as a student, then both academic and athletic performance could be negatively affected and vice versus. Conversely, Killeya-Jones described the student-athlete who experiences *role integration*, as one who evaluates both roles as equal, navigates comfortably within each without causing discomfort as it relates to the other role, and thus, is positively psychologically adjusted. Killeya-Jones administered the Hierarchical Classes Identity Instrument (HICLAS), a well-being and satisfaction measure and a demographic survey to 40 elite male student-athletes from a Division I football program and found that the most important indicator of college adjustment was not these elite college football players' evaluation of their athletic role, but rather their positive evaluation of their *student role*. It is this student role that has been the source of controversy, research investigation, and legislation for the past four decades.

Gaston-Gayles (2004) who acknowledged the idea of the student and the athlete, introduced motivation factors (career athletic, academic, student-athlete athletic) into the student-athlete collegiate academic performance prediction model, and like Killeya-Jones

(2005) found that academic motivation was a significant factor in predicting college grade point average.

On-campus Environmental Factors

While the NCAA has created Student-Athlete services programs, such as the CHAMPS Life Skills (NCAA, 2009) to help student-athletes balance and manage the demands of a dual identity (student and athlete) and researchers investigated the effect of these demands on overall life satisfaction and academic performance. Along with various precollege and non-cognitive variables, Comeaux (2005) argued that “few studies examined the life experiences or environmental factors that influence the academic success of the student-athlete while on campus” (p. 1).

Comeaux (2005) examined interaction with faculty as predictors of college GPA for male student-athletes in revenue-producing sports (football and basketball), using data drawn from the Cooperative Institutional Research Program’s 4-year longitudinal survey, with a sample of 459 black and white student-athletes. Using Astin’s (1993) Input-Environment-Outcome (I-E-O) model for “studying college impact variables on students . . . [which allows] researchers to measure student change during college by comparing outcome characteristics [e.g., academic performance] with input characteristics [e.g., pre-college and demographic variables]” (p. 1), Comeaux (2005) found no significant effects of parental status, income, and level of parental education attainment on academic achievement of male student-athletes. However, the regression model indicated that a combination of precollege academic variables (high school GPA, SAT Verbal) and faculty/student interaction strongly predicted student-athlete academic performance. Comeaux’s findings showed a strong relationship “between input variables,

academically oriented interactions, and student-athletes' success" (p. 1), based on a large sample drawn from longitudinal data including black and white athletes at predominantly white institutions. Comeaux emphasized that "the quality of formal and informal communication between faculty and student-athletes is essential to academic achievement and overall college experience" (p. 1).

While Comeaux's (2005) research on faculty/student interaction added important information to the body of literature by emphasizing the importance of research investigating on campus academic impacts for collegiate student-athletes, the selected non-cognitive variable did not account for the prior literature including the life experiences and stress created from sustaining dual identities and expectations that impact the student-athlete. The academic prediction model still needs a non-cognitive variable that accounts for the unique experience of the student-athlete and potentially impacts his/her on-campus experience.

Summary

In summary, Killeya-Jones (2005) argued that student-athletes manage dual roles in that their roles as student and athlete exist in a shared domain and compete for limited psychological and temporal resources. Killeya-Jones further argued that stress results from this competition and that the student-athlete's method for addressing this stress would be role integration or identity discrepancy. For the individual who views his/her roles as equal, the demands of each would limit the negative consequences (Killeya-Jones; Pearson & Petitpas, 1990), such as educationally purposeful disengagement, social isolation and decreased academic motivation (Gaston-Gayles, 2004; Gaston-Gayles & Hu, 2009; Parham, 1993). However, for the student-athlete who experienced identity

discrepancy, or an overemphasis of his/her athlete role versus his student role, Killeya-Jones like Taylor and Ogilvie (2001) argued that the resulting psychological discomfort would produce negative academic and athletic implications. Killeya-Jones found that the most important indicator of well-being was how the individual felt about *his* student role.

Yet, Comeaux (2005) argued that little research examined the unique experiences of the student-athlete that impacts his/her on-campus academic experience, such as faculty-student interaction as a non-cognitive predictor variable for grade point average. He found that both on a formal and informal level, substantive faculty/student-athlete communication impacts student-athlete academic performance.

Although this (Comeaux, 2005) research provided useful information, as did studies about the student-athlete experience, role integration, and enhancing social support services and academic motivation (Gaston-Gayles, 2004; Killeya-Jones, 2005; Umbach, Palmer, Kuh, & Hannah, 2006), they still failed to provide a variable that linked the unique experiences and expectations of student-athletes and the on-campus academic experience. This study attempts to bring the theories, perspectives, and findings of those studies together by suggesting a non-cognitive variable (academic communication apprehension) that could potentially account for the unique experience of student-athletes and the stress this creates, as well as the impact on their on-campus academic experience (comfort interacting with professors, comfort interacting with other students, and comfort delivering in-class academic presentations), and ultimately on academic performance.

Communication Apprehension

McCroskey (1977) defines Communication Apprehension (CA) as an “individual’s fear or anxiety related to a real or anticipated need to communicate with

another person or persons” (p. 78). McCroskey (1982) divided communication apprehension (or anxiety) into four subgroups (trait, generalized contexts, generalized people, and state), described below.

An individual that identifies more with his/her anxiety about communicating than with any other factor (time, situation, circumstance, or even person), is described as having *trait communication anxiety*, meaning that this apprehension is a relatively stable aspect of that individual’s personality or communication (McCroskey, 1982). Even though they and others might perceive themselves to be poor communicators, this does not mean that they are (McCroskey, 1977).

While trait apprehensives experience anxiety as a function of their existence, some individuals experience anxiety only in certain types of settings, ranging from public speaking, to large crowds, to interpersonal contact. McCroskey (1977) referred to this as *Generalized Contexts Communication Apprehension*. When applied to students who experience generalized contexts CA in an academic setting, they tend to avoid communication with professors and peers to discuss the subject matter (McCroskey & Sheahan, 1978), will pay less attention and understand and retain less class information (Booth-Butterfield, 1988), and underperform in class-required oral presentations (Freimuth, 1976); all of which are measures linked to academic performance in the college classroom. For student-athletes who enter the college classroom feeling academically unprepared, or who experience faculty (Engstrom, Sedlacek & McEwen, 1995) or non-student-athlete peer bias (Engstrom & Sedlacek, 1991, 1993), and have academic demands from both the institution and their sport, communicating in the

classroom setting could evoke discomfort or anxiety, especially when they perceive the context as having an impact on the athlete role in their lives.

The third subgroup of CA is *Person-based Communication Apprehension*, which describes an individual who experiences anxiety when he/she interacts with another individual perceived to be of a certain type, or classification (i.e., authority figure, teacher, non-student-athlete) or with specific people, irrespective of the situation (McCroskey, 1977). For example, a student-athlete could experience person-based communication apprehension when interacting with professors or with certain professors, or with other students in the class.

Because of previously described demands of sport, student-athletes are often isolated from other students and campus academic life. Jolly (2008) found that this isolation resulted in negative faculty and non-athlete perceptions of student-athletes. “Approximately one-half of student-athletes surveyed nationally reported that they felt their professors discriminated against them because they were athletes” (Potuto & O’Hanlon, 2006). Recent findings (Simons, Bosworth, Fujita, & Jensen, 2007; Suggs, 2003) have echoed prior research (Baucom & Lantz, 2001; Engstrom, Sedlacek & McEwen, 1995) indicating faculty bias against student-athletes. This tension could possibly create *person-based* anxiety when communicating in the academic setting for the student-athlete, or academic communication apprehension.

The fourth subgroup of CA is referred to as *State* and it occurs when an individual who would otherwise be relaxed in the situation, becomes apprehensive about communication in response to a very specific set of circumstances (McCroskey, 1977). While a variety of circumstances might provoke anxiety in the individual, the

apprehension fades. For example, a student-athlete who normally experiences great ease when interacting in the classroom setting, could become apprehensive in response to hearing about having to give or giving an oral presentation in class, or having to partner for a group project, or having to discuss grades or a difficult to understand lesson with his/her professor. The student-athlete's response to this moment of anxiety could have impacts on his/her academic performance in the classroom and could lead to Generalized CA in the academic setting.

Implications of Communication Apprehension

Communication in the classroom is often associated with fulfilling an assignment . . . subject to evaluation at both a social and academic level. Not only is communication an expected and common part of the classroom, communication is often the basis for the evaluations an instructor makes about a student. Anxiety about such communication events, both to protect a grade and not to appear to the teacher and other students as 'stupid,' makes communicating in a classroom an anxiety producing event. The emotional reaction to the communication episode or event reflects an underlying fear about the possibility of failure or negative labeling that may result from a lack of adequate performance. (Bourhis, Allen, & Bauman, 2006, p. 212)

McCroskey and McCroskey (2002) identified four major effects of communication apprehension: "internal discomfort, communication avoidance, communication withdrawal, and overcommunication" (p. 3). For example, McCroskey and McCroskey found that in response to anxiety students would miss class or if in class, would fail to offer responses to teachers' questions or when called upon respond with I don't know. In addition, McCroskey and McCroskey found that on rare occasions, communication apprehensive students may talk too much in an attempt to talk through their anxiety.

Allen and Bourhis (1996) argue that high levels of CA impact how an individual responds both in the *quality* and *duration* of his/her communication and find that it negatively impacts each. Bourhis, Allen, and Bauman (2006) found a significant negative correlation between cognition and anxiety, and argued that since the finding established a connection between the psychological and behavioral communication apprehension is a valid measure.

Academic Communication Apprehension and Student-Athletes

The literature indicates that communication anxiety impacts student academic achievement in the areas of grade point average, willingness to interact with professors, and cognitive learning (McCroskey, 1977; Messman & Jones-Corley, 2001). However, there is little research, if any concerning the difference between non-athletes and athletes in college with regard to their level of communication anxiety (the fear or anxiety associated with real or anticipated communication) and specifically when interacting in an academic environment (i.e., communicating with professors, other students in the classroom, giving oral presentations). In two previous studies, James (2006, 2007) found no statistically significant difference in the communication anxiety levels of athletes when compared with non-athletes. Though the results were limited by sample size and other variables, the studies provide a foundation for the argument that communication anxiety potentially impacts student-athletes in much the same way the literature indicates that it affects non-athletes. Studies have concluded that overall grade point averages are lower for high apprehensiveness, that high levels of CA can interfere with the storage and recall of information, that students with high CA are judged by teachers as friendly and

well-behaved but ignorant, have more absenteeism and higher rates of illness and drop-out rates (McCroskey, 1977).

Summary of Communication Apprehension

In essence, the psychological impacts of communication apprehension seem to have behavioral impacts on students in class that lead to too little or too much communication and consequently on students' willingness to engage in the setting. This study addresses student-athletes' communication in an academic setting or academic communication apprehension, by measuring it and introducing it into the prediction model. For collegiate student-athletes, given the demands of their dual roles and multiple stakeholders and governing requirements, this phenomenon of anxiety or fear response to real or anticipated communication (i.e., communication apprehension) when interacting in an academic setting seems logical and could pose real problems, such as failure to interact with faculty and non-student-athletes in class, as well as heightened anxiety when giving in-class academic presentations. Communication apprehension may lead to underperformance in the classroom, which may result in psychological distress and role discrepancy. This non-cognitive or environment variable of academic communication apprehension, like social support, motivation, and self-perception previously discussed, has been linked to academic performance and should, therefore, along with traditional measures be introduced into the prediction model, and investigated as a possible explanation for variance in academic grade point average among student-athletes.

The Problem

Although graduation rates of student-athletes are improving and in fact have eclipsed their non-athlete counterparts (Fountain & Finley, 2009), critics' arguments have increased that many athletes are not having to work hard to earn grades and are clustered into classes and matriculate with easy majors (Brady, 2008; Denhart, Villwock & Vedder, 2009; Fountain & Finley; Knobler, 2007). In addition, while graduation rates for student-athletes as a whole have increased, subpopulations, such as African American male student-athletes and student-athletes participating in revenue-generating sports are still well below their Caucasian student-athlete counterparts and those in non-revenue-generating sports (Fountain & Finley). As NCAA legislation has historically responded to substantive outcries, reasonably, they will respond to these complaints. Therefore, research investigating the on-campus academic experience and possible impacts to academic performance are essential.

While the Comeaux (2005) study and others (e.g., Gaston-Gayles & Hu, 2009) have pointed to the importance of investigating faculty/student-athlete interaction among other variables that impact the cognitive and affective outcomes for student-athletes, little research if any has introduced a variable that seems to account for both the unique life experience and the environmental factors that impact the student-athlete's academic success on campus.

Purpose of the Study

This study attempts to add to the body of literature by investigating an environmental factor (academic communication apprehension) that might account for the student-athlete's unique experience and impacts his or her ability and/or willingness to

fully engage in the classroom experience, thereby potentially impacting academic performance.

Research Questions

The study seeks to answer the following questions:

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race and sport classification?

CHAPTER THREE

Methodology

The study seeks to answer the following questions:

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race and sport classification?

The institution, sample population, instruments, data collection procedures, and methods of analyses are outlined in this chapter.

Participants

A total of 360 student-athletes returned both the Academic Information Sheet and the ACAT, yet one individual responded to a very limited number of questions, and data from this subject were not included in the sample. Thus, the study included a sample of 359 subjects, of which 184 were male (51%) and 175 were female (49%). The subjects represented 13 of the 16 NCAA varsity sports (81%) at the university, with the

exceptions being men's and women's golf and women's tennis. The researcher made multiple attempts to access student-athletes from the three sports listed above through telephone and email messages to coaches and strength coaches. These attempts were completed over a three-month period beginning in July and ending in late September 2009 to no avail. A summary of the demographics can be found in Table 1 and is organized with respect to sport classification: revenue (football, men's and women's basketball) and non-revenue sports (all other participating sports). See Chapter Four for a detailed description of the demographics based on the Academic Information Sheet.

Table 1

Revenue vs. Nonrevenue Sports Demographics

Variable	Revenue <i>n</i> = 119		Non-Revenue <i>n</i> = 240		Total <i>n</i> = 359	
	<i>n</i>	Percentage	<i>n</i>	Percentage	<i>n</i>	Percentage
Gender						
Female	11	6.3	164	93.7	175	48.6
Male	108	58.7	76	41.3	184	51.1
Ethnicity						
African American	67	69.1	30	30.9	97	26.9
Caucasian	46	19.6	189	80.4	235	65.3
Hispanic/Latin	3	25.0	9	75.0	12	3.3
Asian	0		3	100.0	3	0.83
Other	3	25.0	9	75.0	12	3.3
Scholarship						
Full	92	63.4	53	36.6	145	40.3
Partial	0		124	100.0	124	34.4
Walk-On	26	29.5	62	70.5	88	24.4

(continued)

Variable	Revenue <i>n</i> = 119		Non-Revenue <i>n</i> = 240		Total <i>n</i> = 359	
	<i>n</i>	Percentage	<i>n</i>	Percentage	<i>n</i>	Percentage
Academic Classification						
Freshman	32	28.3	81	71.7	113	31.4
Sophomore	29	32.6	60	67.4	89	24.7
Junior	30	36.6	52	63.4	82	22.8
Senior	28	37.8	46	62.2	74	20.6
Study Hall Hours/Week						
None	61	30.3	140	69.7	201	55.8
0-3 Hours	34	54.0	29	46.0	63	17.5
4-7 Hours	20	40.0	30	60.0	50	13.9
8 or > Hours	4	8.9	41	91.1	45	12.5

Instruments

There were two primary instruments used in this study. The Academic Communication Anxiety Test (ACAT) was used to collect the participants' academic communication apprehension scores and demographic information. The Academic Information Sheet was used to gather the student-athletes' high school and college academic performance.

The Academic Communication Anxiety Test (ACAT)

The Academic Communication Anxiety Test (ACAT) (James, 2006) was used to measure communication apprehension specifically within an academic context. The ACAT was designed as a 42-item survey that measures three domains of anxiety (student with professor interaction, academic presentations in the classroom setting, and in class interactions with other students). The paper-survey took approximately 15 minutes to complete.

The *ACAT* was inspired by McCroskey's (1982) Personal Report of Communication Apprehension (PRCA-24). McCroskey's PRCA-24 continues as the standard measure of communication anxiety with alpha reliability coefficients ranging from .93-.95 (McCroskey, Beatty, Kearney, & Plax, 1985). Other reliable measures similar to McCroskey's (1982) PRCA-24 exist to evaluate specific components of communication anxiety. For example, a popular alternative to the PRCA-24 is the Communication Anxiety Inventory (CAI) (Booth-Butterfield & Gould, 1986). The CAI assesses an individual's predispositions to experience anxiety in three contexts: interpersonal, small groups, and public speaking.

James' (2006) *ACAT* five-point Likert-scaled instrument focuses on communication anxiety specifically within an academic context. Two previous studies (James, 2006, 2007) using the instrument concluded that The *ACAT* comprises three factors with alpha reliability coefficients of .91 (communication apprehension with professors), .92 (communication apprehension with class presentations), and .79 (communication apprehension with classmates), respectively. A copy of the *ACAT* can be found in Appendix A.

Academic Information Sheet

The Academic Information Sheet (*AIS*) was created by the researcher and used to collect demographic, as well as precollege and undergraduate academic information about the participant. The *AIS* consists of questions about race, gender, academic classification, sport of participation, scholarship status, and if the student has had a public speaking course prior to participating in the study. See Appendix B for a copy of the *AIS*.

Procedures

Two types of procedures were used in this study: the first description below indicates how the researcher secured participation for the data collection, while the second describes how the data were collected.

Securing Participation

In order to secure participation in this study, several activities were completed by the researcher. Initially, the Athletics Director was contacted to obtain permission and support for the study and for the teams to participate in the study. The Athletics Director's support (Appendix C) was used to secure the collaboration with the Associate Athletics Director for Strength and Conditioning (ADSC) for survey administration. The ADSC, who oversees four other department heads of strength and conditioning coordinated with the staff and the researcher to set up pre-arranged dates/times for the researcher to administer the survey. Reminder emails were sent to the staff about the pre-arranged data collection sessions, noting the Athletics Director's permission and support for the study, and requesting that they ask their student-athletes to participate and to emphasize the importance of their participation in the volunteer survey. It should be noted that the ADSC was chosen as a collaborator for several reasons, primarily because this individual, unlike coaches, has access to the large majority of student-athletes across all sports. In addition, the data collection began in the summer and ended in early fall, and the ADSC was the primary "contact" for many student-athletes in the summer. Based on the collaboration, it was determined that the best days and times for implementation of the ACAT was prior to or following voluntary summer workout sessions. The researcher contacted via email the head coaches for men's tennis, men's

and women's track and field and cross country, as well as equestrian in order to arrange data collection at the beginning of the school year meeting in mid August. The researcher was granted permission from each coach to attend the meetings and to conduct the survey. It should be noted that the researcher oversaw all on-site data collection during these meetings.

Data Collection

The researcher was present and oversaw each data collection session, giving directions to participants and ensuring that they detached and placed the signed consent form in the proper envelope and placed the survey with the attached demographic page, including student identification number, in the proper envelope. Detaching the signed consent form and placing these in a separate envelope, provided comfort that participants' responses and demographic information remained anonymous, as their personal information was linked to the questionnaire only through student identification number.

The researcher used the Academic Information Sheet (*AIS*) (attached to the survey), with the participant-provided student identification number on it to obtain precollege scores and current college grade point average from the Assistant Athletic Director for Student Services. Again, no names were exchanged or discussed, except in two cases where the participants reported that they forgot their student identification number, but wanted to participate in the survey so gave permission to participate by providing their name on the survey. Otherwise, the information was obtained only by using the participant-provided student identification number. The Assistant Athletic Director for Student Services collected the academic information in late September.

Data Analysis

After entering the data into the statistical program SPSS®, the data analysis consisted of several steps. First, a general analysis of the data was completed in order to determine the normalcy of the data set. This included descriptive analysis of skewness and kurtosis. Second, an exploratory factor analysis (*EFA*) using Principal Axis Factoring followed by Promax rotation was performed on the *ACAT* because the instrument is still relatively new. A Cronbach's alpha (1951) coefficient was established for both the instrument and the subscales that resulted from the factor analysis. The factor analysis again revealed three factors on a new 39-item instrument with high to moderate alpha coefficients (.91; .89; and .79) and an overall .94 alpha level.

Then, a series of analyses were performed to address the research questions. Traditional prediction model formulas generally included two variables—high school grade point average and standardized test scores each multiplied by the regression coefficient, added together, with the amount of error subtracted: Cumulative College Grade Point Average = Coef (High School GPA) + Coef (ACT/SAT score) – Error.

This study introduced the academic communication apprehension variable (*ACA*) into the model. It was hypothesized that the variable (comprised of the three anxiety factors previously described) would expand the prediction equation, provide a new prediction model for student-athlete academic success given certain variables, and answer the research questions: How much variance in college GPA is accounted for by academic communication apprehension over and above the other variables? Is there a difference in predictor models with respect to gender, race, and sport classification? Which of the chosen cognitive (high school GPA, SAT/ACT score) and non-cognitive variables (academic communication apprehension variables) explain the majority of the variance in

college GPA among student-athletes? The basic model for the present study was:

$$\text{Cumulative College GPA (CCA)} = \text{Coef (High School GPA)} + \text{Coef (ACT/SAT score)} + \text{Coef (ACA variables)} - \text{Error}.$$

Finally, to determine if sport classification accounted for variance in academic GPA among student-athletes in the study, an Independent Samples T-test was conducted.

CHAPTER FOUR

Results

Review of the Research Questions

This chapter addresses the results from analyses of the Academic Communication Anxiety (ACAT) instrument and the research questions. For review, the research questions are as follows:

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race and sport classification?

Organization of Chapter

The chapter is organized into four sections. First, a description of the demographics of the sample obtained from the participants that completed the Academic Information Sheet is presented. Next, reliability of the instrument is addressed, followed by the statistical analyses performed to assess the validity of the instrument. Finally, the

statistical analyses relating to the research questions are included, as well as additional findings.

Academic Information Sheet

Demographics

As noted in Chapter Three, a total of 360 student-athletes returned both the Academic Information Sheet and the ACAT, yet one individual responded to a very limited number of questions, and data from this subject was not included in the sample. Thus, the study included a sample of 359 subjects, of which 184 were male (51%) and 175 were female (49%). The subjects represented 13 of the 16 NCAA varsity sports (81%) at the university, with the exceptions being men's and women's golf and women's tennis. Approximately 40% of the sample of student-athletes indicated they are receiving a full scholarship ($n = 145$; 40.2%), while about one-third reported receiving partial scholarship assistance ($n = 124$; 34.3%). About one-fourth of the subjects indicated they receive no financial assistance through the Athletics Department (referred to as "walk-ons") ($n = 88$; 24.4%). The sample primarily included student-athletes that indicated their hometown was in-state ($n = 228$; 63.2%), while about one-third ($n = 120$; 33.2%) came to the university from out-of-state. There were 10 participants (2.8%) that indicated that they permanently reside outside of the United States. Participants were asked to provide academic classification, ethnicity, academic major, and the number of study hall hours per week they were required to complete. A summary of these results can be found in Tables 2, 3, 4 and 5, respectively.

Table 2

Participants by Academic Classification

Classification	Participants ($n = 359$)	Percentage of Total (100%)
Freshman	112	31.0
Sophomore	89	24.7
Junior	82	22.7
Senior	74	20.5
Graduate School	1	0.3

Table 2 shows that the sample included student-athletes from all academic classifications with about one-third being freshman ($n = 112$; 31%); one-fourth sophomore ($n = 89$; 24.7%); and about 20% listed as juniors ($n = 82$; 22.7%) and seniors ($n = 74$; 20.5%). One student reported being a graduate student ($n = 1$; 0.3%).

Table 3

Participants by Ethnicity

Ethnicity	Sample ($n = 359$)	Percentage of Total (100%)
Caucasian	235	65.3
African American	97	27
Hispanic/Latin	12	3.3
Asian	3	0.8
Other*	12	3.3

Note: *Other included subjects selecting Mixed Race, Native American, etc.

Table 3 shows that the large majority of the sample selected Caucasian ($n = 235$; 65.3%) with the next largest group selecting African American ($n = 97$; 27%) to describe their ethnicity. There were three subjects that described themselves as Asian (0.8%).

Table 4
Participants by Academic Major

Academic Major	Sample ($n = 359$)	Percentage of Total (100%)
Business	94	26.5
Health Science	50	13.9
General Studies	36	10.0
Undecided	36	10.0
Science	24	6.6
Communication Studies	23	6.4
Psychology	18	5.0
Education	10	2.8
Pre-Med	9	2.5
Engineering	8	2.2
Other*	51	13.8

*Note: Majors where there were less than 2% of the participants were aggregated. Examples of majors included English, Interior/Fashion Design, and Political Science.

Table 4 is an abridged table that shows a total of nine self-reported academic majors, as well as Undecided. The sample represented 29 different academic majors ranging from Business ($n = 94$; 26.5%) and Health Sciences ($n = 50$; 13.9%), to Science ($n = 24$; 6.6%), Communication Studies ($n = 23$; 6.4%) and Psychology ($n = 18$; 5%), to Forensic Science ($n = 1$; 0.3%) and Music ($n = 1$; 0.3%). Of the sample, 36 participants

(10%) indicated that they were General Studies majors and 36 participants (10%) indicated “Undecided” for an academic major.

Table 5

Participants by Number of Study Hall Hours/Week

Study Hall Hours/Week	Sample ($n = 359$)	Percentage of Total (100%)
None	201	55.8
0-3 Hours	63	17.5
4-7 Hours	50	13.9
8 or more Hours	45	12.5

Table 5 reveals the self-reported number of study hall hours each subject was required to complete on a weekly basis. Over one-half of the subjects ($n = 201$; 55.8%) reported they had no (or “none”) required study hall hours, while about 18% ($n = 63$; 17.5%) indicated they had between 0-3 hours of required study hall per week. Finally, about 14% of the subjects reported having 4-7 hours required hours ($n = 50$; 13.9%), while about 13% had 8 or more hours ($n = 45$; 12.5%).

Academic Communication Anxiety Instrument (ACAT)

Reliability

In order to determine the quality of the Academic Communication Anxiety Instrument (ACAT) (James, 2006), a series of analyses were conducted. First an initial reliability analysis of the instrument was completed to examine its internal consistency

using Cronbach's (1951) coefficient alpha. The coefficient alpha for the 42-item ACAT is presented in Table 6.

Table 6

Initial Cronbach's Alpha Coefficient ACAT

Cronbach's Alpha	Number of Items
.932	42

According to Table 6, the alpha coefficient for the 42-item ACAT instrument exceeds an optimal level. The results revealed a high internal consistency of the instrument with a Cronbach alpha calculated at .93.

Validity

In addition to reliability, a factor analysis of the ACAT (James, 2006) was completed. Based on use in two previous studies (James, 2006; 2007), the ACAT has been reported to have three factors (communication apprehension with professors, communication apprehension with academic presentations, communication apprehension with other students). Despite the sample size of James (2007, $n = 356$), the ACAT is a relatively new instrument; therefore an exploratory factory analysis (EFA) was conducted (Kerlinger, 1986). The EFA was completed in the initial phase of analysis using principal axis factoring as the method of extraction followed by a Promax rotation on the total 42-item scale and is presented in Table 7.

Table 7

Total Variance Explained for the 3 Factor Solution

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11.936	30.605	30.605	11.367	29.147	29.147	9.886
2	2.442	6.263	36.868	1.788	4.584	33.731	8.281
3	2.314	5.933	42.801	1.788	4.558	38.289	5.836

Table 7 shows that the initial EFA of the 42-item ACAT resulted in a three factor solution which accounted for 38.29% of the variance. In addition, it was determined that three survey questions (2, 7, and 37) did not load on any factors.

In the second phase of analysis, the process was repeated in that an exploratory factor analysis approach (principal axis factoring, followed by Promax rotation) was completed with the three items removed that did not load on any factors. Thus, only 39 items were included in the second factor analysis, presented in Table 8. Each subscale was then analyzed to determine if items should be retained, keeping only those with structural coefficients or factor loadings exceeding .30 and belonging to factors with eigenvalues more than 1.00.

Table 8 shows the structural coefficients ranging from .31 to .78 for each item onto the three subscales (*CAP* – Communication Apprehension with Professors; *CACP* – Communication Apprehension with Class Presentations; *CAS* – Communication Apprehension with other Students; respectively). The analysis revealed only minimal

items (Q16, Q17, Q25 and Q40) loaded onto multiple factors; with structural coefficients ranging from .304 to .360, thus all 39 items were retained. Therefore, the results of the analyses including the retained items are included.

Table 8

Factor Loadings for ACAT Items

Item Number	Factor 1 <i>CAP</i> Anxiety with Professors	Factor 2 <i>CACP</i> Anxiety with Class Presentations	Factor 3 <i>CAS</i> Anxiety with Other Students
Q3	.782		
Q1	.717		
Q29	.638		
Q34	.621		
Q13	.618		
Q19	.595		
Q23	.554		
Q24	.534		
Q18	.502		
Q41	.497		
Q27	.491		
Q6	.452		
Q30	.442		
Q31	.442		
Q17	.439	.353	

(continued)

Item Number	Factor 1 CAPI Anxiety with Professors	Factor 2 CACP Anxiety with Class Presentations	Factor 3 CAS Anxiety with Other Students
Q33	.391		
Q20	.385		
Q25	.350	.304	
Q14	.323		
Q10		.776	
Q12		.759	
Q9		.712	
Q2		.668	
Q21		.626	
Q26		.562	
Q5		.538	
Q15		.502	
Q16	.343	.478	
Q32			.616
Q38			.562
Q35			.545
Q28			.517
Q40			.474
Q22	.360		.464
Q36			.406
Q42			.402

(continued)

Item Number	Factor 1 CAPI Anxiety with Professors	Factor 2 CACP Anxiety with Class Presentations	Factor 3 CAS Anxiety with Other Students
Q39			.369
Q8			.358
Q4			.319

Note: Extraction Method: Principal Axis Factoring Rotation Method: Promax with Kaiser Normalization

A second internal consistency analysis was conducted on the newly reduced 39-item scale using Cronbach's (1951) coefficient alpha. The results are presented in Table 9.

Table 9

Cronbach's Alpha Coefficient on post-EFA ACAT

Cronbach's Alpha	Number of Items
.935	39

Table 9 shows the results of the reliability analysis on 39 items (as opposed to the original 42) due to the results of the factor analysis. The results revealed a slightly higher internal consistency of the new 39-item instrument with a Cronbach alpha calculated at .935 (versus .932). In addition, internal consistency analyses were conducted on the three factors with the results presented in Tables 10 (*CAPI*), 11 (*CACP*) and 12 (*CAS*).

Table 10

Reliability Analysis for Subscale 1 (CAPI)

Cronbach's Alpha	Number of Items
.905	19

Table 10 shows the results of the reliability analysis of the *CAPI* (Communication Apprehension with Professors) subscale. The results revealed a high internal consistency of the nineteen-item scale with a Cronbach alpha calculated at .91.

Table 11

Reliability Analysis for Subscale 2 (CACP)

Cronbach's Alpha	Number of Items
.892	9

Table 11 shows the results of the reliability analysis of the *CACP* (Communication Apprehension with Class Presentations) subscale. The results revealed a relatively high internal consistency of the nine-item scale with a Cronbach alpha coefficient calculated at .89.

Table 12

Reliability Analysis for Subscale 3 (CAS)

Cronbach's Alpha	Number of Items
.785	11

Table 12 shows the results of the reliability analysis of the CAS (Communication Apprehension with other Students) subscale. The results revealed a moderate internal consistency of the 11-item scale with a Cronbach alpha calculated at .79.

Research Questions 1, 2 and 4

Review of the Questions

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race and sport classification?

Analysis

To determine if a multiple regression analysis was appropriate to answer research questions 1, 2 and 4, a Pearson Correlation test was conducted. The results are shown in Table 13.

The results revealed correlation coefficients under .5 except for precollege entrance exams and college grade point average $r = .57, p < .05$ and sport with gender $r = -.54, p < .001$. However, these variables were included in the regression analysis.

Table 13

Correlations of Variables

	BU GPA	Gender	Race	School	Study Hall	Pub Speak	Grade Class	Home town	Confidence in Grad	Z-score ACT SAT	Sport Part.	Z-score (factor1)	Z-score (factor2)	Z-score (factor 3)
BU GPA	1.000	-.216	.263	.218	-.368	.198	-.008	-.027	.192	.571	.367	-.057	.052	.019
Gender		1.000	-.139	-.041	-.182	-.207	.092	-.181	-.004	-.118	-.540	-.172	-.211	-.006
Race			1.000	.265	-.003	.201	.008	.186	.148	.351	.316	-.074	.020	-.004
School				1.000	-.013	.356	-.192	.020	.188	.356	.264	-.010	.025	-.063
Study Hall Hours					1.000	.244	-.494	.126	-.217	-.205	.093	.158	.141	-.037
Pub Speak						1.000	-.451	.141	-.002	.194	.336	.113	.152	.009
Grade Class							1.000	.048	.144	-.008	-.086	-.091	-.101	.087
Hometown								1.000	-.024	.049	.231	-.018	.040	.014
Confidence in Grad									1.000	.199	.094	-.215	-.146	-.229
Z-score ACT SAT										1.000	.342	-.127	-.053	.073
Sport Part											1.000	.036	.154	-.020
Z-score (factor1)												1.000	.698	.515
Z-score (factor2)													1.000	.459
Z-score (factor3)														1.000

Multiple regression. To answer research questions 1 and 2 a multiple regression analysis was conducted using the Enter/Block method. Using this method examined whether academic communication apprehension measures predicted collegiate grade point average over-and-above gender, race, scholarship status (full, partial, “walk-on”), the amount of study hall hours per week required (none, 0-3 hours, 4-7 hours, 8 or more hours), having a public speaking class or not, academic classification, hometown (in-state, out-of-state, or international), confidence about graduating, precollege entrance score (standardized SAT/ACT score), and/or sport participation (revenue football or basketball or non-revenue-generating sport). The results of the analysis are presented in Table 14.

Table 14

Regression Analysis (Enter Method) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.727a	.528	.506	.38340	.528	23.706	12	254	.000
2	.731b	.535	.505	.38389	.006	.840	4	250	.501

Note: a. Predictors: (Constant), ZACTSAT, Class1, Hometown1, Mjr1, Gradeconfden, Gender1, Race1, Schol, Pubspkg1, Studyhall, NCAAGPA, revenuevsnon

b. Predictors: (Constant), ZACTSAT, Class1, Hometown1, Mjr1, Gradeconfden, Gender1, Race1, Schol, Pubspkg1, Studyhall, NCAAGPA, revenuevsnon, Zscore(fac3), Zscore(fac2), Zscore(fac1), Zscore(amendtotalca)

According to Table 14 precollege standardized test scores, academic classification, hometown, major, graduation confidence, gender, race, scholarship status, public speaking class, study hall, precollege GPA, and sport classification accounted for a significant amount of the variance in college GPA, $R^2 = .528$, $F(12, 254) = 23.71$,

$p < .001$ and an adjusted $R^2 = .51$, $F(12, 254) = 23.71$, $p < .01$. Academic

Communication Apprehension measures did not appear to account for statistically significant variance in college GPA as indicated by Model Summary 2 in Table 13, $R^2 = .54$, $F(4, 250) = .84$, $p = .501$.

Five of the predictor variables (high school core GPA, study hall hour requirement, academic classification, and precollege standardized test score) made significant contributions to the prediction equation. The results are presented in Table 15.

Table 15

Predictor Variables of Collegiate Grade Point Average

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
Gender	-.015	.060	-.013	-.244	.807	.618	1.618
Race	.033	.035	.045	.940	.348	.796	1.257
School	-.049	.036	-.070	-1.389	.166	.739	1.353
College Major	.007	.004	.070	1.480	.140	.838	1.194
High School Core GPA	.443	.056	.460	7.898	.000**	.546	1.830
Study Hall Hours	-.109	.034	-.166	-3.185	.002**	.682	1.466
Public Speaking	.041	.062	.033	.653	.515	.734	1.362

(continued)

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	T		Tolerance	VIF
College Grade Classification	-.063	.026	-.188	-2.388	.018*	.759	1.318
Hometown	.000	.048	.000	.006	.995	.815	1.227
Confidence in Grades	-.039	.057	-.033	-.686	.494	.819	1.221
Revenue v Non-revenue sport	.078	.068	.070	1.152	.250	.503	1.989
ACT/SAT scor score	.097	.026	.218	3.720	.000**	.541	1.850

Note: *.05 level **.005 level

As seen in Table 15, a student-athlete's High School Core GPA, contributed the greatest to the prediction equation $t(265) = 7.90, p < .001$. Likewise, the subject's precollege standardized score on the ACT/SAT contributed strongly to the prediction equation $t(265) = 3.72, p < .001$. The Study Hall hours requirement also made a strong contribution to the prediction model $t(265) = -3.185, p < .01$. This finding indicates an inverse relationship between grade point average and study hall hours in that the number of study hall hours required lead to a lower college GPA. The final finding of statistical significance was the academic classification variable $t(265) = -2.39, p = .018$, which also showed an inverse relationship. In other words, the higher the grade classification (senior, junior) the lower their college GPA.

Question 3

Review of the Question

3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?

Analysis

To answer question 3 an independent samples t-test analysis was conducted to examine the relationship of sport classification to collegiate academic grade point average (GPA). The results of the analysis are presented in Tables 16 and 17.

Table 16

Mean College Grade Point Average for Revenue vs. Non-Revenue Sports

Revenue (1) vs. Nonrevenue (2)	n = 272	Mean	Std. Deviation	Std. Error Mean
1	108	2.7558	.51780	.04983
2	164	3.1564	.50672	.03957

According to Table 16, the portion of the sample described as those participating in revenue-generating sports (football and men's and women's basketball) (n = 108) and with a reported grade point average, had a mean college grade point average of 2.76 (*SD* = .518). Whereas, those participating in sports described as non-revenue generating (all others) (n = 164) and with a reported grade point average, had a mean college grade point average of 3.16 (*SD* = .507).

Table 17

T-Test Analysis of Sport Participation and GPA

GPA	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	.075	.785	-6.324	270	.000
Equal variances not assumed			-6.296	225.614	.000

Table 17 shows a statistically significant relationship between sport participation and collegiate grade point average $t(270) = 6.32, p < .001$. The researcher used Gravetter and Wallnau (2008) formula (t^2/t^2+df) to calculate the 12.9% effect size. According to Gravetter and Wallnau, this was a medium to large effect size.

Summary of Results

The reliability analyses of the ACAT instrument used in the study resulted in what George and Mallery (2003) suggest is an excellent Cronbach's alpha coefficient (.93). To examine the scale's construct validity, an exploratory factory analysis was conducted using principal axis factoring as an extraction method and Promax rotation. This analysis resulted in an extraction of three factors (questionnaire items) and a three factor solution. The three resulting scales are identified as CAPI (communication apprehension with professors), CACP (communication apprehension with class presentations) and CAS (communication apprehension with other students in class). Subsequent reliability analyses on the new 39-item ACAT resulted in a high Cronbach's

alpha coefficient (.94) and moderate to high (George & Mallery) alpha coefficients on the subscales: CAP (.91); CACP (.89) and CAS (.79).

A linear multiple regression analysis was conducted to address research questions 1, 2 and 4. The results indicated a non-statistically significant relationship between the academic communication apprehension predictor variables and collegiate grade point average. However, coefficients from the predictor equation indicated a statistically significant relationship between college GPA and four variables used in the study: 1) Precollege entrance exam scores (ACT or SAT), 2) High School Core GPA, 3) an inverse relationship between both academic classification, and 4) and inverse relationship between required study hall hours.

Finally, an independent samples t-test revealed a statistically significant difference in grade point average (GPA) of student-athletes participating in sports described as revenue-generating (football and men's and women's basketball) versus those participating in sports described as non-revenue-generating (all other sports) with subjects from the non-revenue-generating sports having a higher GPA.

CHAPTER FIVE

Discussion

The purpose of this study was to examine academic communication apprehension's impact on the academic performance of collegiate student-athletes and to introduce the variable into the academic performance prediction model for this unique subgroup of students. This section is organized in four parts: A summary of the sample, an overview of the findings related to the research questions, limitations of the study, and suggestions for future research.

Summary of Sample

The study included 359 subjects of which 184 were male (51%) and 175 were female (49%) student-athletes from a private university that participates in NCAA Division I athletics and is located in the Southwestern part of the United States. The subjects represented 13 of the 16 varsity sports, with only men's and women's golf and women's tennis not participating. The lack of participation from these sports accounted for only 28 potential subjects (10 from men's golf; 11 from women's golf, and 7 from women's tennis). Overall, the sample is a solid representation of student-athletes at the private university.

Demographic information of note includes that the majority of the participants reported being Caucasian (n = 235; 65.3%) followed by African-American (n = 97; 26.5%). In addition, over one-fourth (25.6%) of the participants reported being "business" majors, while 20% claimed being either a "general studies" major (10%) or

“undecided” (10%). With the implementation of the Academic Progress Rate (NCAA, 2007), where scholarship student-athletes have to complete a certain percentage of their major by the end of each year, it is not surprising to see many student-athletes *clustered* in majors that have numerous electives, which includes business and general studies. This is consistent with previous research (Denhart, Villowock, & Vedder, 2009; Fountain & Finley, 2009; Knobler, 2007; McCormick & McCormick, 2006; Sharp & Sheilly, 2008) that indicated student-athletes at NCAA Division I schools often cluster and do so in majors with numerous electives. It is interesting to note that the university has over 130 majors, yet more than one-fourth of the student-athletes chose “business” as a major. This is consistent with Lederman’s (2003) findings indicating large concentrations of student-athletes in majors with variations based upon institution, for example, he found clusters of football players as Economics majors at Harvard and as Communication majors at Wake Forest.

Summary of Results Related to Research Questions

Review of Questions 1, 2, and 4

1. Which of the chosen cognitive (e.g., high school GPA, standardized entrance exam scores) and non-cognitive variables (e.g., communication apprehension) explain the majority of the variance in academic GPA among student-athletes?
2. Does academic communication apprehension when included in the predictor model account for variance in academic GPA among student-athletes?
4. Is there a difference in predictor models with respect to gender, race, and sport classification?

Questions 1 and 4

Cognitive variables. The results indicated that core high school GPA ($t = 7.90$, $p. < .001$) and standardized entrance exams (ACT or SAT) ($t = 3.72$, $p. < .001$) correlated significantly with college GPA. This finding is consistent with much of the prior research (Paulos, 2008; Sellers, 1992; Zheng, Saunders, Shelley, & Whalen, 2002) which concluded that precollege entrance scores and high school GPA are strong predictors of college GPA for both students and student-athletes.

Noncognitive variables. The non-cognitive variable “academic classification” (e.g., freshman, sophomore, junior, senior) was found to be significantly and inversely correlated with college GPA ($t = -2.39$, $p = .018$). In essence, the results indicate that the higher the academic classification (senior, junior) the lower the college GPA. The author found no other research that addressed this finding. Possible reasons for this result include the fact that this may be an artifact of the APR in that the higher the classification, the higher the percentage of one’s major must be completed. According to the current academic continuing eligibility standards (NCAA bylaw 14.4.3.2) (NCAA, 2008), a student-athlete must complete 40% by the end of the sophomore year, 60% by the end of the junior year, and 80% of his/her major by the end of the senior year. As noted in Table 4 in Chapter Four, most of the student-athletes were in traditional majors including Business (26.5%), Health Science Studies (13%). Thus, as the student-athletes progress through their majors and coursework becomes more challenging along with the demands of sport, GPA may suffer due to an inability to either enroll in less hours or switch majors because of eligibility standards. Interestingly, 20% of the sample reported either being

General Studies majors or Undecided, so the inverse relationship with GPA could potentially point to the quality of academic support provided for these student-athletes or their academic motivation.

From a theoretical perspective, the decrease in GPA over time may relate to the Identity-Discrepancy Theory (Killeya-Jones, 2005), that asserts that one can have multiple identities and they can co-exist harmoniously if the individual identifies strongly with each. Killeya-Jones noted that problems can occur if an individual (student-athlete) over-identifies with one role, or is forced to identify with one role at the neglect of the other. In this situation, the upper-class student-athlete may begin to identify him- or herself less as a student and more strongly as an athlete as playing time increases. This increased focus as an athlete and decreased focus as a student is also occurring as the student-athlete must increase the number of hours completed in their major.

Another non-cognitive variable (study hall hours) was found to have a significant and inverse relationship with the student-athletes' college GPA. In essence, the more study hall hours the participants reported being required to attend on a weekly basis, the lower their GPA. Examining the data closely indicates that approximately one-half (55.8%) of the student-athletes reported being required to attend no (zero) hours of study hall on a weekly basis. According to Kazadi (personal interview, October 2009), the current approach to study hall at this university is for freshmen student-athletes in football, basketball, and track to meet with tutors, academic counselors, and learning specialists (if needed) for a total of approximately 5 hours per week and for freshman student-athletes in baseball, equestrian, and soccer to complete 6 hours per week of study hall. After the freshman year, study hall is not required for student-athletes that are doing

well academically (i.e., 2.5). Kazadi further indicated that after the freshman year, student-athletes are required to work with tutors in classes in which they are having academic difficulty. In this context, it makes sense that there is an inverse relationship between study hall hours and GPA because those student-athletes that have lower GPAs would be required to take more study hall hours.

In addition, there may be a relationship between academic classification and study hall hours, and their combined impact on college GPA. Student-athletes are required to attend study hall as freshman and may be directed to take several elective courses that might not be too demanding in order to increase their academic success early. Yet, as they progress through their sophomore, junior, and senior years and have to take more classes in their major due to APR requirements, but are not required to attend study hall, their group GPA may decrease. Yet, to answer the question concerning the relationship between academic classification, study hall hours, and their combined impact on grade point average is beyond the scope of this project, but would be an interesting direction to study in the future.

Question 2

The non-cognitive variable of “academic communication apprehension” revealed a non-significant effect on college GPA ($R^2 = .54$, $F(4, 250) = .84$, $p = .501$). This finding was unexpected, but can be explained. Of note, as described in Tables 9, 10, 11 and 12 (see Chapter Four) and detailed later in this chapter, the *ACAT* (James, 2006) appears to be a reliable and valid measure of academic communication apprehension. Therefore, the researcher believes the instrument measured academic communication apprehension. Additionally, it is important to keep in mind that as Comeaux (2005)

noted few studies have examined the life experiences that influence the academic success of student-athletes. The little research that has been completed has focused on a variety of non-cognitive variables that may be indirectly related to communication apprehension. For example, Comeaux found a strong relationship between academically-oriented interactions between student-athletes and faculty members, while Sedlacek and Adams-Gaston (1992) found that self-concept and support systems are a better way to predict student-athlete success over and above high school GPA and standardized test scores. While one can make the argument that academically-oriented interaction between student-athletes and faculty members and general self-concept may have some interaction with academic communication apprehension, the overlap was not strong enough to show noticeable effects in this study.

Another reason for the non-significant relationship between academic communication apprehension and grade point average is that some students might not be academically motivated. Therefore, these individuals exhibit little or no anxiety regarding interacting with faculty, their student peers, or making a public speech because their interest or motivation for academic success is low. This is consistent with Killeya-Jones' (2005) Identity-Discrepancy Theory that, as described above, a student-athlete may over identify with one role (i.e., athletics) to the detriment of another role (i.e., academics). In this case, the student-athlete that strongly identifies him or herself as "an athlete" and under-identifies as a "student" may exhibit little academic anxiety.

Another reason for the lack of significance between college GPA and academic communication apprehension (ACA) may be that ACA has more impact for underclassmen. Navigating the college environment is more challenging as a freshman

and sophomore than as a junior or senior. All students have to learn how to interact with faculty members, meet high expectations, or ask for clarification on assignments, yet one could argue that a freshman may be more anxious about attempting these interactions than a senior because it is a new experience. In addition, a senior student may have little interaction with a faculty member or have limited academic anxiety because she/he “has figured it out.” In other words, seniors and juniors probably experienced some level of academic communication apprehension, but this decreased as they became more acclimated to the college culture. As noted in Table 1, approximately 43% of the sample was juniors or seniors, which may have influenced the results.

A final possible reason why academic communication apprehension did not show a significant relationship with college GPA is related to the limited population sample. While there were 359 subjects in the sample – a relatively high number of participants for a study such as this, they were from a single university. Therefore, there may be something unique about the student-athletes at this private school that inadvertently affected academic communication apprehension. Speculation on this includes that the university is known to have one of the higher graduation rates, APR, and overall GPA averages within its NCAA conference.

Review of Question 3

3. Does participation in a revenue-generating sport (football and basketball) versus non-revenue generating sport (baseball, tennis, track, soccer, volleyball, golf) account for variance in academic GPA among student-athletes?

The Independent Samples T-test analysis revealed a statistically significant inverse relationship between sport participation (revenue versus non-revenue generating)

and collegiate GPA. This finding supports previous literature (Carodine et al., 2001) that student-athletes in revenue-generating sports have a greater likelihood of having lower college grade point averages. Some researchers (Hood, Craig, & Ferguson, 1992) attribute this finding to lower precollege academic performance, while others (Gaston-Gayles, 2004; Gerdy, 2006; Simons & Van Rheenen, 2000) attribute the finding to greater demands for participation in revenue-generating sports, including psychological pressures, social integration and isolation problems, time demands of the sport, and more athletic versus academic motivation. In addition, perception on the part of student-athletes and research findings (Bowen & Levin, 2003; Sellers, 1992) of faculty/athlete bias or stereotyping of student-athletes as “dumb jocks”, lack of encouragement for academic endeavors, and poor student-athlete academic services, as well as failure to achieve a balance between the demands of the sport and the classroom (Killeya-Jones, 2005) have all been linked to poor academic performance for student-athletes participating in revenue-generating sports.

ACAT Questionnaire

As noted in Chapter 4, it appears that the Academic Communication Apprehension Test (*ACAT*) is a reliable and valid measure of academic communication apprehension. Based on a reliability analysis using Chronbach’s Alpha (1951), the results revealed high internal consistency ($p = .935$) for a 39-item survey. In addition, the exploratory factor analysis (*EFA*) revealed three factors (anxiety interacting with professors, anxiety with public speaking, and anxiety interacting with students). This is important because it is challenging to find a solid instrument to measure non-cognitive

variables that relate to social interaction in a specific context (on-campus academic experience).

Study Limitations

A few factors limited the results and conclusions of this study. While the sample size of 359 is impressive to get from one university, it might not represent student-athletes from other universities because it was limited to participants at one university. In addition, the university is a private school that participates in NCAA Division 1 athletics, which represents only 16 out of the 120 (13%) of the Division 1 football programs. Yet, as Adler and Adler (1988) argued, student-athlete research is difficult because of the intense loyalty of athletics organizations, comparing these organizations to war combat units that are characterized by secrecy and a fierce classification system of insiders and outsiders. This has led to most studies on student-athletes to use samples drawn from lower division schools (NCAA Division II or III) with more open access than Division I (FBS) programs, small sample sizes (Killeya-Jones, 2005) or large sample sizes using longitudinal data gathered from national data centers (Comeaux, 2005). In other words, collecting data from 359 student-athletes representing 13 sports from an NCAA Division 1 athletic program included guarded academic information is quite solid, even though it represents a population from only one university.

Directions for Future Research

Based on the results of this study and its limitations, there are a few recommendations for future research. First, the *ACAT* appears to have been a valid and reliable measure of academic communication apprehension, so the instrument may be

used in future studies that address academic anxiety of college students. In addition, the instrument could be used as a combined assessment measure in student-athlete adjustment studies conducted at the conclusion of the freshman year or when Student Athlete Services personnel are making determinations about future academic support for a student-athlete. A research study that is more qualitative might be able to tease out some of the academic communication apprehension of student-athletes for purposes of treatment. A random selection of student-athletes from all classifications (freshmen, sophomore, etc.) that are interviewed on a regular basis might provide some qualitative depth to the concept of academic communication apprehension.

Another future direction includes gathering data from many different types of universities and athletic divisions. This could include a combination of public and private schools of different sizes (large, medium, small), universities from different settings (urban, suburban, rural), and different divisions (NCAA Division I, II, III; NAIA). By expanding to other settings, it would provide different comparison groups that may be critical to the assessment of non-cognitive variables in relation to college GPA.

Finally, stratifying the sample in an attempt to access student-athletes that appear to be academically at risk prior to attending college (quantified by high school GPA and ACT or SAT scores) and comparing them to a stratified sample of student-athletes that would be predicted to be academically successful, might provide some additional insight into academic communication apprehension. It would be interesting to learn if student-athletes with exceptional standardized test scores and high school GPA are more or less academically anxious than those with sub-standard pre-college scores. It might be

discovered that the student-athletes with high expectations, irrelevant of the level they participate in college athletics, may identify as a student more than an athlete, while individuals with lower academic expectations entering college may identify more as an athlete. This research could be combined with the idea of interviewing student-athletes over time to see how they express their interests and anxieties.

APPENDICES

APPENDIX A

Academic Communication Anxiety Test (ACAT) (James, 2006, inspired by McCroskey, 1982)

Directions: Please read each statement; then, circle the description (i.e. strongly agree, etc.) that most closely represents your feelings of the statement you just read.

1. While preparing to talk to a professor, before or after class, I feel tense and nervous.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
2. I feel excited and/or comfortable when I see the word “presentation” on a syllabus.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
3. My thoughts become confused and jumbled when I am speaking to a professor.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
4. Right after speaking with a professor I feel that I have had a pleasant experience.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
5. I get anxious when I think about upcoming class presentations.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
6. I have no fear of talking to professors outside of class.
(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

7. Although I am nervous just before starting to talk with my professors, I soon settle down after starting and feel calm and comfortable.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
8. I look forward to talking to professors outside of class.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
9. When the professor announces a speaking assignment in class, I can feel myself getting tense.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
10. I look forward to class presentation days.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
11. I feel uncomfortable when I am talking to my professors about grades.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
12. I enjoy preparing to give a presentation in front of my professors.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
13. I am in constant fear of forgetting what I intend to say to my professors.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
14. I'm comfortable even if my professor asks me something that I don't know.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree
15. I face the prospect of giving a presentation in front of my professor with anxiety.
- (1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

16. I feel that I am in complete possession of myself while giving a presentation in front of my professors.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

17. My mind is foggy when I am giving a presentation in front of my professors.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

18. I do not dread speaking with my professors outside of class.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

19. I sweat just before speaking with my professors outside of class.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

20. My heart beats normally right before I speak with my professors outside of class.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

21. I experience considerable anxiety right before I have to give a class presentation.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

22. I seek out relationships with my professors on a friendship level.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

23. Realizing that professors are on a time schedule makes me nervous when talking to them.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

24. While speaking to professors outside of class, I know I can control my feelings of tension and stress.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

25. I breathe faster just before starting a presentation in front of my professors.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

26. I feel comfortable and relaxed in the hour or so just before giving a presentation in front of my professors.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

27. I do poorer on class presentations because my professor is there.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

28. I feel comfortable initiating a conversation with other students who I don't know.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

29. When I make a mistake or misspeak in front of my professors, I find I hard to concentrate on what else I want to say.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

30. During an important meeting with my professors I experience feelings of confidence.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

31. I have trouble falling asleep the night before I know I have to give a class presentation in front of my professors.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

32. I regularly introduce myself to people whom I don't know on-campus.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

33. I feel anxious when I have to sit next to other students who I don't know.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

34. While speaking to my professors, I remember what I want to say.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

35. I do not enjoy interacting with classmates I don't know.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

36. I try to sit next to classmates I don't know.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

37. I feel anxious when my professors pick my group for group assignments.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

38. I feel relaxed and comfortable working in groups with people I don't know.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

39. I do not feel comfortable asking other students for notes when I've missed class.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

40. I feel confident that I can communicate with other students in class.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

41. I constantly feel fearful that I'll look stupid in front of other classmates.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

42. I enjoy working in groups on class assignments.

(1) Strongly Agree (2) Agree (3) Undecided (4) Disagree (5) Strongly Disagree

APPENDIX B

Academic Information Sheet

Directions: Please respond to following questions as accurately as possible. Do not put your name on this page or on the survey, but *please remember to include your student identification number*. Thank you kindly for participating in this survey.

1. Your Baylor student identification number

2. What is your sex
 - a. Male
 - b. Female

3. What is your race
 - a. African American
 - b. Asian
 - c. Caucasian/White
 - d. Hispanic
 - e. Other (describe: _____)

4. What sport do you play? _____

5. Are you:
 - a. Full-Scholarship
 - b. Partial-Scholarship
 - c. Walk-On

6. What is your major? _____

7. How many hours a week are you required to attend Study Hall?
 - a. None
 - b. 0-3
 - c. 4-7
 - d. 8 or more

8. Have you had a Public Speaking course in college?
- a. Yes
 - b. No

9. What is your classification in the classroom?
- a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

10. Hometown: _____

11. How confident are you that you will graduate from college? (Circle One)

Not Confident

Somewhat Confident

Confident

Very Confident

APPENDIX C

Permission Letter to Conduct Study



1500 S. University Parks Drive • Waco, TX 76706 • (254) 710-1234 • www.BaylorBears.com

January 20, 2009

Mr. Bart Byrd
Assistant Athletics Director for Student Athlete Services
Simpson Athletics and Academic Center
Baylor University
Campus

Dear Bart:

Our recent report of the best academic semester on record makes us all very proud. This report reflects the hard work of our student-athletes, encouragement from coaches and the outstanding support provided by our Student-Athlete Services Department.

We have worked to implement programs, services and staff, such as the creation of the Learning Specialist position a couple of years ago, to achieve our goal of maintaining a high level of academic achievement amongst our student-athletes. Though our program has not experienced academic distress, with heightened mandates from the NCAA, including increasing standards for continuing eligibility and the impact of the APR on athletics programs, our goal is stay on the cutting edge of academic support for our student-athletes.

One way to accomplish this is by conducting scientifically-based studies, directly investigating impacts on student-athletes' academic progress. We have the opportunity to participate in such a study.

Mrs. Kai'Iah James who was a professor for seven years in the Communication Studies Department is a Ph.D. candidate in the department of Educational Psychology at Baylor and for three years has focused her doctoral research on student-athletes and their academic success. Mrs. James has developed a study that investigates the variables that predict academic success. In other words, this study has the potential of giving us a tool to assist in predicting student-athletes' academic performance.

The variables selected are ones that can be addressed, if we find that the student-athlete would have difficulty succeeding. One of the variables is new to prediction models, but not new to the research literature in its impact on academic success in a college classroom. Our participation in this study is in line with Baylor Athletics' commitment to academic success, provides scientific backing for the work of our academic support programs and provides an additional tool so necessary to help quickly identify problem areas for our student-athletes that will or are preventing them from excelling academically.

Mrs. James has my full support to conduct this study and to gather the information necessary to complete the study. Because all of our student-athletes have to at a minimum check-in with their academic advisors, this study is best routed through Student-Athlete Services. Please work with Mrs. James and our student-athletes on this matter.

Thank you.

A handwritten signature in black ink, appearing to read "Ian McCaw".

Ian McCaw
Director of Athletics

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