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Levels Of Engagement Among Male, College Basketball Players

Mary Botts
University of Central Florida

LEVELS OF ENGAGEMENT AMONG MALE COLLEGE BASKETBALL PLAYERS

by

MARY MCPHERSON BOTTS
B.S. Vanderbilt University, 2005
M.Ed. Vanderbilt University, 2007

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ABSTRACT

This study examined the engagement of male, college basketball players within the National Collegiate Athletic Association (NCAA). The literature review shows a connection between engaging in educationally purposeful activities and student retention. Because some student athletes, male collegiate basketball players in particular, struggle to graduate at the same rate as their fellow student athletes, student engagement offers one lens to examine the educational experiences of basketball players.

The National Survey of Student Engagement (NSSE) was used to collect levels of engagement along four identified variables. These four variables, part of Chickering and Gamson's Seven Principles for Good Undergraduate Education, were relevant to the study as they were factors student athletes could control. These factors included: active learning, cooperation among students, interaction with faculty, and time on task. Student athlete responses were analyzed by three factors including NCAA athletic division, race, and highest level of parental education.

This study found no significant difference in levels of engagement among the NCAA's three athletic divisions. Additionally, no significant differences in engagement were found based on the highest level of education reached by the student athlete's parents. Last, ethnic background presented only one significant difference within the active learning variable. The other three variables showed no significant difference based on race. The lack of statistical differences is

meaningful as it signifies the strength of the basketball culture. The culture of this sport permeates all divisions of college basketball and transcends the background of its players. Thus, players who should display different levels of engagement based on institutional or background characteristics display similar levels of engagement.

To my family and my dogs.

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CHAPTER 1
INTRODUCTION

"It's not something I usually admit to, that I applied to Ohio State 60 percent for the sports. But the more I do tell that to people, they'll say it's a big reason why they came, too" (Pappano, 2012, p. 1). Sports and how teams perform on the field matter. "Only in the United States, of course, have athletics assumed such a close and representational identity with higher education" (Bailey, 1991, p. 6). A seemingly unbreakable relationship between higher education and athletics has developed that is not seen anywhere else in the world (Bailey, 1991; Gerdy, 2006). Intercollegiate athletics has become the means by which people experience the American higher education system.

Athletics often becomes the face of the university. Former University of Michigan President, James Duderstadt, emphasized the place of athletics on a college campus by saying, "Nine of 10 people don't understand what you are saying when you talk about research universities. But you say 'Michigan' and they understand those striped helmets running under the banner" (Pappano, 2012, p. 1). Pope and Pope (2008) concluded that an appearance in the NCAA basketball tournament contributed more to a university's reputation than employing a world-renowned faculty member. Although athletics can bolster a school's reputation, they can also weaken it. When athletes fail to uphold their academics, as seen through cheating scandals, NCAA sanctions, slow progress toward degree or low graduation rates, the university is seen as failing. The

academic underperformance of student athletes can negatively impact the reputation of the whole university (Duderstandt, 2000; Sperber, 1991).

Examples of athletic influence on a school's reputation abound. On April 4, 2011, confetti fell on the University of Connecticut basketball team as they won the National Collegiate Athletic Association (NCAA) basketball tournament. In 2013, however, the team will be unable to participate due to the subpar progress toward degree and low graduation rates of their basketball players. This rule, approved by the NCAA in fall of 2011, was established in response to mandates by the Knight Commission of Intercollegiate Athletics (2010) and former NCAA president Myles Brand (2001) to strengthen the academic standards for college basketball players. Arne Duncan, Secretary of Education, praised the new measure by saying, "When we joined this conversation two years ago, many experts were skeptical that the NCAA would ever move to deal with the problem of low graduation rates among a small minority of tournament teams. But they were wrong. College presidents have acted courageously and are leading the way" (O'Neil, 2011, p. 1). This policy highlights the growing emphasis on the academic lives and performance of student athletes.

To better understand issues surrounding student athletes and engagement, the following background information on student engagement highlights the measures that positively impact the engagement of the aggregate student population and how that knowledge is being applied to student athletes, specifically male college basketball players.

Background

Engagement, or effort and involvement in academic experiences in college (Harper & Quaye, 2009), is one of the most influential factors on student learning and development (Astin, 1993). Engagement began with the work of Tyler (Merwin, 1969) and his concept of "time on task". His theory states that the more time a student invests in a given academic subject, the more learning that will occur. Astin's (1999) theory of involvement built on Tyler's (Merwin, 1969) "time on task" theory by stating that involvement was a function of both time and energy dedicated to an educational task. Involvement theory makes the student an active participant in the learning experience. Based on his earlier research on student attrition, Astin (1984) hypothesized that the decision to persist was the result of a student's degree of involvement. Around the same time, Pace (1982) further expanded the notion of "time on task" to include a student's quality of effort. Chickering and Gamson (1987) built on Astin's (1984) and Pace's (1984) theories to develop seven principles for good undergraduate education. Kuh (2009) used Chickering and Gamson's (1987) seven principles of good undergraduate education as a stepping-stone to the view of engagement accepted at the time of this study. Engagement is the result of both quality of effort, time and involvement, and has been positively associated with educational, personal, and social outcomes, as well as persistence (Astin, 1993; Endo & Harpel, 1982; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Kuh & Vesper, 1997; Tinto, 1993).

Engagement happens both inside and outside of the classroom. Regularly, engagement in the classroom leads to engagement outside of the classroom (Tinto, 1993). Students can become engaged in their college experiences by engaging in educationally purposeful activities such as: (a) interacting with peers and faculty members; (b) participating in class; (c) working with other students to achieve an academic goal; (d) having a conversation with a student who holds different beliefs or values; (e) volunteering, or researching with a faculty member (Astin, 1993; Chickering & Gamson, 1987; Kuh, 2009a; Pace, 1982; Tinto, 1993).

Research about student athletes and engagement can be organized in several ways including athletic division, gender, and type of sport. Researchers have shown that Division III student athletes are more engaged in academic challenge, active and collaborative learning, and interaction with faculty members than Division I and Division II student athletes (Umbach, Palmer, Kuh & Hannah, 2006).

Gender has been shown to play a role in engagement of student athletes. Umbach et al. (2006) found female student athletes were more engaged in educationally purposefully activities than female non-athletes. Male athletes, however, were only shown to be equally as engaged as male, non-athletes. The findings held true when analyzing measures of active and collaborative learning and interaction with faculty (Umbach et al., 2006).

Sport type, or the classification of sport, has also been shown to impact engagement (Symonds, 2006). Revenue sport athletes are typically engaged in ways different than non-revenue sport athletes. Revenue sport athletes reported being engaged in more group work and giving more presentations (Symonds, 2006), interacted more with study groups and discussed grades with faculty more than non-revenue sports (Crawford, 2007).

Male college basketball players have had the lowest graduation rate of any group of student athletes in both Division I and Division II (National Collegiate Athletic Association [NCAA] 2011a; 2011e). Division III institutions, because they have not offered athletic scholarships, have not been required to report graduation rate data to the NCAA. At the time of the present study, only a small body of research had been conducted on the engagement of college basketball players. Adler and Adler's (1991) groundbreaking study is the only one to date to focus specifically on the engagement of collegiate men's basketball players. After five years of observation, Adler and Adler found that when the players entered the university they were idealistic and optimistic about their ability to perform academically in college. As early as their second semester, however, these same players began to exhibit signs of disengagement. Adler and Adler (1991) found that the players were uninvolved in any academic decision-making. The pursuit of educationally purposeful activities was overridden by the power and status of the coach. Fifteen years

later, Comeaux, Harrison, and Plecha (2006) positively linked interaction with faculty members and college GPA with revenue athletes.

Statement of the Problem

Although a plethora of researchers have shown a positive link between engagement and student achievement (Astin, 1993; Tinto, 1993; Pascarella and Terenzini, 2005; Kuh, Schuh, Whitt, & Associates, 2010; Pace, 1980), there is a paucity of research on the engagement levels of student athletes (Comeaux, Speer, Taustine & Harrison, 2011). Engagement research has been lacking for male basketball players across athletic divisions. Male basketball players, in Divisions I and II, have had the lowest percentage of graduates of any NCAA sport with basketball organizations consistently graduating less than 50% of players within five years (NCAA, 2011c). Williams, Sarraf, & Umbach (2006) state the student-athlete experiences and educational outcomes are related to a variety of factors including the athletic level or division they compete in.

Subpar graduation and academic progress rates result in penalties from the NCAA including reduction in scholarships, practice time, and exclusion from post-season tournaments (NCAA, 2010). These penalties may impact a university negatively by interfering with the university's visibility and resulting in decreases in the number of university applications and in average SAT scores of the incoming freshman class (McComick & Tinsley, 1987; Smith, 2009). "No school can afford the kind of publicity a deep run into the tournament offers"

(Dosh, 2012, p. 1). Pope and Pope (2008) concluded that an appearance in the NCAA tournament would increase the percentage of perspective students who send their SAT scores to that institution by up to 11%. When George Mason University appeared in the sweet sixteen in 2006, out-of-state applications rose by 54% during the next admission cycle (Dosh, 2012). In summary, Pope and Pope (2008) stressed "There is little doubt that the media exposure generated by high-profile college sports such as football and basketball can act as a powerful advertising tool for institutions of higher education" (p. 3). Borshoff and Meltwater, a media firm, estimated that after Butler's NCAA tournament run, the recognition the school received was the equivalent of $1.2 billion (Dosh, 2012).

In addition to penalties sanctioned by the NCAA for subpar academic performance, there has been increased pressure for accountability from outside of athletics (Knight Foundation Commission on Intercollegiate Athletics, 2010). Graduation rates have frequently served as a benchmark to assess the value of a particular institution's degree as well as a benchmark for student success (DeBrock, Hendricks, & Koehker, 1996). Therefore, it is vital to examine strategies to augment academic achievement and graduation rates of male basketball players. If engagement differences can be established in male basketball players, strategies to foster engagement might be able to mitigate the differences in graduation rates among participants in this sport. However, it is unclear if such differences in engagement exist at the time of this study.

Purpose of the Study

Collegiate student athletes have been deemed a distinctive population within the academy and deal with demands uncommon to the typical student (Ferrante, Etzel & Lantz, 1996; Sack, 1988; Watt & Moore, 2001). Thus, it is necessary to examine whether their unique experiences within the university impact how invested they are in educationally purposeful activities. The purpose of this study was to determine the impact of athletic division, race, and levels of parental education on engagement of male college basketball players. The results from this study add to the literature on the topic and may impact practice by determining if strategies to augment opportunities for less engaged student athletes should be recommended.

Significance of the Study

College athletics is the lens by which large number of Americans experience higher education (Gerdy, 2006; Jones, 2009). Unfortunately, many believe college athletics is a broken system, focused only on generating revenue (Brand, 2001; Knight Foundation Commission on Intercollegiate Athletics, 2010). The connection to education and educating students who participate in athletics has been lost (Knight Foundation Commission on Intercollegiate Athletics, 2010; Sperber, 1990).

The Knight Foundation Commission on Intercollegiate Athletics, a group formed to propose academic reform in college sports, believes that the public's

faith in the higher education system will not continue if “college sports are permitted to be a circus” (Knight Foundation Commission on Intercollegiate Athletics, 1993, p. 8). Focusing on all the peripheral activities, or everything except educationally purposeful activities, is analogous to the Titanic’s band playing while the ship was sinking. The commission has charged universities to bridge the gap between athletics and the university, encouraging them to integrate student athletes into the university culture (Knight Foundation Commission on Intercollegiate Athletics, 1993; 2001). The Knight Commission has recommended that the ”institution will provide student athletes with the opportunity for academic experiences as close as possible to the experiences of their classmates” (Knight Foundation Commission on Intercollegiate Athletics, 1993, p. 56), and they should “be mainstreamed through the same academic processes as other students” (Knight Foundation Commission on Intercollegiate Athletics, 2001, p. 23).

Adler and Adler (1991) observed that basketball players became increasingly disengaged from educationally purposeful activities the longer they were at the university. James’ (2010) research supported Adler and Adler’s (1991) findings by showing college GPA for intercollegiate football players was inversely related to class standing. In other words, the further student athletes progressed at the university, the lower were their college GPAs. This study will add to the existing body of research on college athletes by investigating whether

a difference in engagement exists between various athletic divisions for male college basketball players.

Research Questions

1. Is there a difference in levels of engagement between Division I, Division II and, Division III male collegiate basketball players as assessed by four measures of engagement: (a) active learning; (b) cooperation; (c) interaction with faculty; and (d) time on task?
2. What differences exist in the levels of engagement among basketball players when both student race and highest parental level of education are considered?

Definition of Terms

The following terms are presented to define the terminology used in this dissertation:

Student athlete: A student within a university who participates on a university-sponsored varsity team sanctioned by the NCAA. Students who participate in intramurals athletics, on spirit squads, or are members of the university band are not included in this definition.

Graduation success rate: A method used by the NCAA to calculate graduation rates for Division I athletes. This method of calculation does not penalize an institution for student athletes who transfer to another institution or

who leave the university “before graduation, so long as they would have been academically eligible to compete had they remained” (NCAA, 2011f, p. 1)

Academic Success Rate: A method for calculating graduation rates for Division II institutions. The formula for calculation is similar to the graduation success rate but also includes non-scholarship athletes (NCAA, 2011f)

Federal graduation rate: A graduate rate calculated by the United States Department of Education that determines the percentage of full time enrolled freshman student athletes who graduate within six years from the institutions where they began their academic careers.

Non-revenue generating sports (non-revenue sports): Any varsity level sport at the university other than football or men’s basketball. These sports are also known as Olympic sports or low profile sports.

Revenue generating sports (revenue sports): Varsity level sports, i.e., football and men’s basketball; also referred to as high profile sports.

Engagement: “A connection in the context of a relationship which a student desires or expects to belong to” (Case, 2007, p. 120)

Academic engagement: A psychological involvement or commitment a student “devotes to an academic experience” (Astin, 1984, p. 518).

NCAA Division I: Primarily comprised of public institutions. In Division I, schools can award student athletes full athletic scholarships.

NCAA Division II: The NCAA's smallest athletic division. Although some of the 10,000 Division II student athletes receive some form of athletic, financial aid, most do not receive a full athletic scholarship.

NCAA Division III: The NCAA's largest athletic division representing 40% of NCAA student athletes. The majority of Division III institutions are small, private institutions. Division III schools do not award any type of athletic scholarships.

Conceptual Framework

The concept of student engagement is an expansive topic, and numerous theorists (Astin, 1984; Chickering & Gamson, 1987; Kuh, 2003; Pace, 1980) have contributed to its current understanding. This study was guided by Chickering and Gamson's (1987) seven principles of good undergraduate education. The primary rationale for the seven principles is two-fold. First, Chickering and Gamson (1987) have been part of the evolution of student engagement, building upon the work of Astin (1984) and Pace (1980). Second, the seven principles of good undergraduate education provided a framework that guided Kuh (2009a) when he constructed the NSSE survey. Chickering and Gamson (1987) extracted key, recurring themes in undergraduate research to develop their seven principles. The principles which make up the seven practices include, "(1) encourages student-faculty contact, (2) encourages cooperation among students, (3) encourages active learning, (4) gives prompt feedback, (5) emphasizes time

on task, (6) communicates high expectations and (7) respects diverse talents and ways of learning" (Chickering & Gamson, 1991, p. 5). This study will be framed using four principles that are most transferable to the NSSE survey including: (a) student-faculty contact, (b) cooperation, (c) active learning, and (d) time on task. The seven principles of undergraduate education will be further explored as part of the review of the literature conducted for this study.

Limitations of the Study

There are limitations in this study. The data collected in this study were self-reported and were based solely on the perceptions of behaviors of the respondents. Thus, accuracy cannot be ensured. Also, the use of archival data prohibits the acquisition of additional information or missing information from the selected cases for investigation. In addition, the schools that make up the three athletic divisions provide varying levels of academic support to their student-athletes. Student athletes within different athletic divisions will have access to structured engagement, or policies devised by the athletic department to encourage participating in educationally purposeful activities. The influence of such institutional practices are not detected by this study. In addition, the archival sample used for this study was not necessarily reflective of the proportion of various racial groups within NCAA, college basketball. Therefore, the findings should not be applied to college basketball at large. Finally, this

study compares the engagement within the realm of college basketball. The findings cannot be used to compare basketball players to other sports.

Organization of the Study

Chapter 1 has provided an introduction to the background of engagement and student athletes, specifically the engagement of male college basketball players. Also included was information on the problem and purpose of the study, research questions, conceptual framework, research limitations and definition of key terms. Chapter 2 presents a historical context of student engagement and a review of Kuh's (2009a) theory of engagement and the National Survey on Student Engagement (NSSE). In addition to further discussion of the conceptual framework, a review of literature pertaining specifically to the engagement of student athletes is included, ending with research specific to college basketball players. The research methodology, data collection and analysis are contained in Chapter 3. The results of the data analysis are presented in Chapter 4. Chapter 5 provides a summary of the findings. The dissertation concludes with Chapter 6, which delves deeper into the significance and implications of the findings.

CHAPTER 2
LITERATURE REVIEW

Introduction

Before exploring issues related to engagement of student athletes and college basketball players, it is necessary to contextualize them within the larger framework of student engagement. Thus, the first section of the literature review will focus on general student engagement, its evolution, and measurable variables. The second section of the literature review provides a background on athletics in American higher education. This includes the formation of college athletics, the three NCAA athletic divisions, and the impact that participation in intercollegiate athletics has on its participants. Third, literature regarding student athletes and engagement is discussed using the four National Survey of Student Engagement (NSSE) benchmarks of academic challenge, active learning, collaborative learning, and interaction with faculty. Finally, issues related to the engagement of collegiate basketball players are presented.

Engagement

"Students learn from what they do in college" (Pike & Kuh, 2005a, p. 186). What students do in college, in other words, engagement has been researched, in one form or another, for the past 70 years (Kuh, 2009a). The amount of time students invest is directly related to academic outcomes (Pascarella & Terenzini, 2005).

Engagement has its deepest roots in Tyler's (Merwin, 1969) time on task theory. Engagement theory was also subsequently influenced by Pace's (1980) quality of effort, Astin's (1984) theory of involvement, and finally Chickering and Gamson's (1987) seven good practices in undergraduate education.

Time on Task

Tyler, a Stanford professor of education (Stanford University News Service, 1994), was the first to show that the time a student spent on an educational task was positively associated with student learning (Merwin, 1969). Learning, according to Tyler, involves putting forth effort into a task. The more time learners are engaged in interactions with a given educational situation or task, i.e., mathematics, reading, and science, the greater will be the transfer of learning. Learners need to be engaged in opportunities to apply skills learned inside the classroom to situations outside the classroom (Merwin, 1969).

Involvement

Students' time is their most valued resource, and academic achievement is a function of both the time and effort devoted to academic experiences. Thus, involvement is defined as "the amount of physical and psychological energy that a student devotes to the academic experience" (Astin, 1999, p. 518). To Astin (1999), involvement included: interaction with faculty, participation in extra-curricular activities, interaction with peers, and the absorption of academic work

(Astin, 1996, 1999). He hypothesized a highly involved student was one who would devote a great deal of time and energy to studying, participate in extra-curricular activities, and have a great deal of interaction with faculty members. In contrast, a lowly involved student would not engage in such behaviors. Involvement is an active state of being, focusing on the behaviors of a student. Astin's (1999) theory did not include internal states such as motivation or what is thought or felt during the activity.

Involvement moves the student to a more active role in the learning process. In his theory, Astin (1999) made five assumptions about involvement. First, involvement is an "investment of physical and psychological energy" (Astin, 1999, p. 519). Second, it happens on a continuum. This means a student can show different levels of involvement in the same activity at different points in time. Third, involvement is both a quantitative and qualitative measurement. It is deemed quantitative through the amount of time spent on an energy and qualitative through comprehension of a given subject or event. Fourth, student learning is correlated with both of the quality and quantity of involvement. Finally, the ability to increase student involvement will increase the effectiveness of educational policies. For any curriculum to be effective, students need to invest the proper amount of effort and energy to achieve their desired outcomes (Astin, 1999)

Astin's (1999) theory of involvement was rooted in earlier models of attrition, specifically in his 1975 study of student departure. Nearly every factor

contributing to attrition can be viewed through the lens of involvement. Factors that have negatively impacted persistence have also been labeled as low involvement or hindering involvement, and the factors that contribute to persistence have been viewed as a function of involvement (Kuh, 2009b). For example, living in a campus residence hall increases time spent on campus, giving the student more opportunities to be involved with campus activities, as well as interact with peers and faculty (Astin, 1999; Tinto, 1998). Astin's (1975) model of student departure emphasized institutional fit as a factor that ultimately influences involvement. It is easier to be involved when the student identifies with the environment or fits within the environment. Dropping out can be a function of boredom or what Astin (1975) believes is lack of involvement.

Moreover, Astin (1999) expressed the belief that all forms of involvement would stimulate positive development, and it "enhances almost all aspects of undergraduate students' cognitive and affective learning" (Astin, 1996, p. 126). Thus, academic involvement would likely yield higher levels of overall satisfaction with the college experience. Student faculty interaction has been shown to be the most influential factor in satisfaction with college. A student's peer group was also shown to be a strong influence on "a student's commitment of time and energy to academic work" (Astin, 1999, p. 527). Tinto (1993) hypothesized in his theory of student departure that:

> There appears to be an important link between learning and persistence that arises from the interplay of involvement and the quality of student

> effort. Involvement with one's peers and with the faculty, both inside and outside the classroom, is itself positively related to the quality of student effort and, in turn, to both learning and persistence. (p. 71)

Tinto (n.d.) listed involvement as one of the five conditions that support retention (Tinto, n.d.; Tinto & Pusser, 2006). Involvement influences the perception of peer and institutional support as well as institutional commitment, which in turn, influences a student's decision to depart the university (Milem & Berger, 1997).

Milem and Berger (1997) found that women have higher levels of initial involvement with peers and lower initial involvement with faculty than their male counterparts. In their study, early involvement with faculty members was shown to have a positive impact on retention. In addition to gender, income was shown to be a factor in initial involvement, and higher income was associated with higher initial involvement. The effect, however, lessened over time (Milem & Berger, 1997).

Quality of Effort

Pace's (1982) theory of quality of effort also positioned students as active participants in their education. "If students expect to benefit from what this college or university has to offer, they have to take the initiative" (Pace, 1982, p. 3). In order for learning to occur, the student must invest both time and effort; it is a quantitative and qualitative equation. Effort, according to Pace (1982), is

about the quality of input students make, and certain efforts are more beneficial to students than others. Quality of effort is extended in several ways. First, quality of effort examines whether students take advantage of the facilities and resources on campus. Are the students using those facilities to their fullest capacity? Second, quality of effort means the amount of cognitive effort. Pace (1982) contended that students need to be active in their cognitive development, making use of the faculty and students around them. An important component of Pace's (1982) theory was that students are "accountable for the amount, scope, and quality of effort they invest in their own learning and development" (p. 4).

In congruence with Astin's (1999) theory of involvement, Pace (1982) indicated that it is what students do while in college that most impact their development. Pace (1982) found that students with higher quality of effort scores made more intellectual gains than those with lower scores. Quality of effort enhances many forms of involvement including participating in extra-curricular activities and living on campus. Students who live on campus and have shown a high quality of effort have been shown to be more satisfied with college than those who scored low on quality of effort. In fact, students who lived on campus, but had a low quality of effort, were equally as satisfied as students who lived off campus (Pace, 1982).

Pace (1982) found that time on task was a weak predictor of educational and learning gains. Freshman with high quality of effort showed more intellectual and cognitive gains than upperclassmen with low quality of effort scores.

Students who scored high on quality of effort had better grades than students who studied more hours but had less quality of effort (Pace, 1982). In essence, Pace (1982) posited that students get out of college what they put into it.

Student Engagement

According to Astin (1993) and Pascarella & Terenzini (2005), students who invest more time in educationally related activities get more out of their college experience. Engagement will not only benefit students while in college but will also help them develop habits that will encourage continuous and lifelong learning (Kuh, 2003, 2009a). Engagement is the result of quality of effort and involvement (Kuh, 2009a). Kuh (2009) described engagement as:

> The engagement premise is straightforward and easily understood: the more students study a subject, the more they know about it, and the more students practice and get feedback from faculty and staff members on their writing and collaborative problem solving, the deeper they come to understand what they are learning and the more adept they become at managing complexity, tolerating ambiguity, and working with people from different backgrounds or with different views (p. 5).

Engagement has been positively associated with gains in critical thinking and general educational abilities (Endo & Harpel, 1982; Kuh & Vesper, 1997). The benefit for all students has been shown to be in a positive direction regardless of background and academic preparation for college (Kuh, 2009a,

2009b). Engagement positively influenced grades for both first year and senior year students. Students with two or more risk factors benefited more from engagement in educationally purposeful activities than those students with fewer than two risk factors (Kuh et al., 2008).

With regard to those students who were most engaged, Pike and Kuh (2005) found that women, minorities, students who planned to go to graduate school, and students living on campus had higher levels of overall engagement. As a result, these students saw the most gains in intellectual and personal development (Pike & Kuh, 2005). In an earlier study, Kuh (2003) identified women, full time students, residential students, those who started and finished at the same institution, students who participated in learning communities, and students with diverse experiences to have the highest amounts of engagement. The background characteristics of students accounted for only a small variance in engagement levels (Pike & Kuh, 2005).

Student success, used interchangeably with engagement by Erwell and Wellman (2007), was defined as getting students into college and through their degrees. These authors believed that student success is influenced by pre-college characteristics, by what colleges do, and by what faculty do. What colleges do was defined by setting high expectations, employing active and collaborative learning strategies, engaging students with diversity, encouraging frequent contact with faculty, and making connections between in class and out of class experiences. Erwell and Wellman believed students were most

successful when these factors were aligned to improve success. Best practices, according to them, should include: identifying active and collaborative learning pedagogies, setting clear and high expectations for students coupled with appropriate support, and creating an early warning detection system for students with deficiencies.

"The relationship between student engagement and the probability of persisting was not linear" (Hu, 2011, p. 97). High levels of social engagement were correlated with increased persistence, but high levels of academic engagement were not (Hu, 2011). Students with higher levels of academic engagement did not persist at higher rates than did students with moderate levels of academic engagement. High-level students graduated at a rate of approximately 80% to 83% of the rate of moderately engaged students. Low engagement students graduated at a rate of approximately 70% (Hu, 2011). Students with both low social and academic engagement had a persistence rate of 59.3%. Hu (2011) indicated that the highest graduation rate was attributed to those students with low to moderate academic engagement and high social engagement, at 97.1%. He also observed that social engagement appeared to be an indicator of persistence and that high levels of academic engagement needed to be coupled with high levels of social engagement to provide any persistence benefit.

It is important to note that some scholars use the terms, involvement and engagement, interchangeably (Wolf-Wendel, Ward, & Kinzie, 2009). "Astin, in

fact, believes that there are 'no essential differences' between the terms engagement and involvement…'Trying to make a distinction between these two words is probably not all that productive, or necessary'" (Wolf-Wendel et al., 2009, p. 417).

Engagement can be measured in several different ways. Kuh (2009a), in collaboration with NSSE, determined engagement based on five measures: academic challenge, active and collaborative learning, interaction with faculty, supportive campus environment, and enriching educational experience. Three of the five measures of engagement that are aligned with variables chosen for the study are discussed in the following sections. They are: (a) academic challenge, (b) active and collaborative learning, and (c) interaction with faculty.

Academic Challenge

People do not rise to low expectations, only to high ones (Chickering & Gamson, 1991; Kuh, 2009a). The more time that is invested in a particular subject, the more students learn, and student achievement becomes a function of both the time and effort devoted to an educational experience (Astin, 1999). The quality of effort students invest in coursework has been linked to positive gains in intellectual outcomes (Kaufmann & Creamer, 1991). "Challenging intellectual. . . work is central to student learning" (Kuh et al., 2010). Kuh et al. (2010) defined academic challenge as the type of work, the amount of work

assigned to students, the educational standards of student work, and the use of complex cognitive skills.

The level of academic challenge is a significant predictor of college GPA for first year students (Fuller, Wilson & Tobin, 2011). However, the significance disappeared when analyzing the data for senior respondents (Baxter Magolda, King, & Drobney, 2010). In Payne, Kleine, Purcelle, and Cater's (2005) study on academic challenge, students initially held a negative view of academic challenge, viewing many of the activities as busy work. Yet, as time progressed, the students began to develop a more positive view of academic challenge, especially when it involved high order thinking skills (Payne et al., 2005). Part-time and non-residential students were less positive about academic challenge, most notably in classes not related to their major. However, within their major, these students were positive about engaging in academically challenging activities (Payne et al., 2005).

The 2011 NSSE survey found the majority of students engaged in activities that could be defined as academically challenging. Table 1 shows the percentage of students who reported sometimes, often, or very often engaging in academically challenging activities.

Table 1

2011 NSSE Percentages: Academic Challenge

Question	Freshmen	Senior
Coursework emphasized analyzing	98%	98%
Coursework emphasized synthesizing	95%	95%
Coursework emphasized making judgments	95%	95%
Coursework emphasized applying	97%	98%
Worked harder than you thought you could to meet an instructor's standards or expectations	94%	95%

Students who experience academic challenge often experience other good practices including interaction with faculty as well as active and collaborative learning. Campuses where faculty employ academically challenging methods saw greater faculty-student interaction in their first-year students. Academic challenge is associated with general knowledge gains in first-year students and personal and social gains in seniors (Umbach & Wawrzynski, n.d.).

Braxton, Brier, and Steele (2007) advised that to reduce departure in a student's second year, faculty should employ academic challenge strategies such as increasing hours of preparation for class, using the library, and requiring group projects. Also recommended was the use of application and synthesis of materials. Students should be involved in research or inquiry related activities (Braxton et al., 2007).

Active and Collaborative Learning

Active Learning

Most student learning, according to Astin (1999) occurs in an environment that encourages active participation. The college classroom is one avenue that influences student integration and subsequent departure. "Tinto contends that if social integration is to occur, it must occur in the classroom because the classroom functions as a gateway for student involvement in academic and social communities of college" (Braxton, Milem & Sullivan, 2000, p. 570). Active learning is defined as a class activity involving "students in doing things and thinking about the things they are doing" (Bonwell & Eison, 1991, p. 2). Learning is not to be a spectator sport. Both active and collaborative learning are said to be an antecedent for academic and social integration (Braxton et al., 2000), and thus indirectly influence persistence (Tinto, 1993). Active learning techniques are also correlated with higher levels of student engagement (Umbach & Wawrzynski, n.d.). This measure has been correlated with higher engagement in other engagement measures including interaction with faculty and academic challenge (Umbach & Wawrzynski, n.d.)

Active learning, namely participating in class discussions and higher order thinking activities, has provided a significant influence on social integration. Group work did not have any statistically significant influence on social integration (Braxton et al., 2000). Knowledge-level exam questions, which

Braxton et al. (2000) identified as passive learning, were found to be negatively correlated with institutional commitment. In contrast, active learning has been determined to be an important factor in student success (Erwell & Wellman, 2007; Kuh & Vesper, 2006), enhancing a student's processing skills, and increasing involvement (Tinto & Pusser, 2006). Additionally, on campuses where active and collaborative learning was employed, students saw gains in personal and social development and general knowledge (Umbach & Wawrzynski, n.d.).

The 2011 NSSE survey showed that over 80% of each student demographic reported sometimes, often, or very often engaging in activities defined as active learning. Table 2 shows the percentage of freshman and senior students engaged in active learning activities.

Table 2

2011 NSSE Percentages: Active Learning

Question	Freshmen	Senior
Asked a question in class or contributed to class discussion	95%	97%
Made a class presentation	85%	93%

Collaborative Learning

Collaborative or cooperative learning involves students working with other students to achieve educational goals. Unlike some active learning activities, cooperative or collaborative learning cannot be done alone (Chickering &

Gamson, 1991). Tinto (1997) found that students who engaged in collaborative learning showed higher social and academic integration, had higher retention rates, studied more hours per week, were more involved with other students, had a better perception of faculty, participated more in their learning, and saw less conflict between their academic and social lives. Kuh et al. (2010) defined both active learning and collaborative learning as "[students] being intensively involved in their education" (p. 11), having the opportunity to apply classroom learning to a variety of settings, and working with other students to solve problems or master material. Furthermore, Johnson, Johnson and Smith (1990) found cooperative learning resulted in higher productivity, augmented self-esteem, and increased student involvement.

Cooperative learning has been viewed as more effective than traditional, passive learning methods (Astin, 1996). In a study of engineering students, traditional teaching methods, such as lectures, led to disengagement (Case, 2007). However, when students were required to engage in group activities, they made new peer contacts and as a result felt more positive about their academic experience (Case, 2007). Similarly, studying with peers has been linked to positive intellectual gains (Kaufman & Creamer, 1991), and students who participated in living learning communities performed better academically than those who did not (Terenzini, Pascarella & Bliming, 1999). Overall, learning in collaborative groups has been thought to be more effective than learning alone (Johnson & Johnson, 1981). Tinto and Pusser (2006) found that involvement

with other students in the classroom yields greater quality of effort, increased learning, and increased success. Tinto (1998) had earlier observed that involvement inside the classroom leads to greater involvement outside the classroom.

The 2011 NSSE survey revealed that the majority of college freshman and senior students surveyed had engaged collaborative learning. Table 3 shows the percentage of students who responded that they sometimes, often, or very often engaged in various activities that were defined as collaborative learning.

Table 3

2011 NSSE Percentages: Collaborative Learning

Question	Freshmen	Senior
Worked with other students on a project during class	88%	88%
Worked with classmates outside of class to prepare for a class assignments	86%	93%
Tutored or taught other students	48%	55%
Participated in communication-based project	39%	48%
Displayed ideas from your reading or classes with other outside of class	93%	96%

Not engaging in collaborative learning may result in social isolation, as students feel like they have to spend more time outside of class working singularly on their studies (Braxton et al., 2000). Astin (1996) recommended that universities employ more cooperative learning models and engage students in

learning communities to stimulate student learning. Braxton and McLendon (2001) added to this line of thinking in advocating that faculty professional development workshops should emphasize both active and collaborative learning pedagogies which foster peer group relationships, better absorption of course material, and heightened levels of social integration. They also expressed their support for active and collaborative learning to be reinforced through assessments, reports and teaching portfolios, and believed that students should be encouraged to select courses which emphasize active and collaborative learning strategies, as well as academic challenge. Tinto (n.d.,1998) recommended that in order to improve student retention, collaborative learning should be encouraged through the use of learning communities and shared collaborative experiences. He posited that students who were involved in shared, collaborative learning experiences were more likely to be engaged with peers outside of class resulting in more learning outside the classroom (Tinto, n.d., 1998).

Interaction with Faculty

Many researchers have addressed the importance of frequent contact with faculty to student success (Astin, 1993; Endo & Harpel, 1992, Erwell & Wellman, 2007) and persistence (Astin, 1975; Spady, 1971; Tinto, n.d.,1993). Interaction with faculty has been shown to influence life goals (Endo & Harpel, 1982), influence occupational choices (Chickering, 1969), influence educational

aspirations (Grigg, 1965), influence academic development (Pascarella & Terenzini, 2005) and personal development (Astin, 1977), increase satisfaction with college (Spady, 1971), positively impact freshman GPA (Pascarella & Terenzini, 2005), and encourage persistence (Tinto, 1993; Spady, 1971). In addition, it has been shown to impact students' general thinking and problem solving skills (Endo & Harpel, 1982).

Student faculty interaction has been a strong contributor to persistence, and Milem and Berger (1997) believed it had more influence than interaction with peers. Tinto (1975) reasoned that this was so because faculty interaction results in increased social integration and institutional commitment, which leads to persistence. Frequency of interaction has been shown to be a statistically strong predictor of persistence (Pascarella & Terenzini, 1980). As noted by Milem and Berger (1997), women initially have demonstrated lower levels of interaction with faculty members than male students. Student faculty interactions that centered on course related material were found to be positively associated with engagement (Umbach & Wawrzynski, n.d.). Socioeconomic status, however, was negatively correlated with faculty interaction with students, cooperation with peers, and involvement in active learning (Kuh & Vesper, 1997).

Endo and Harpel (1982) validated earlier findings by showing that interaction frequency and quality of contact had positive impacts on academic, social, and personal outcomes. The frequency of faculty contact had the greatest impact on intellectual outcomes but also impacted social and personal

outcomes. Quality of contact, however, only showed a significant impact on intellectual outcomes. In a study conducted to document changes in student behavior, Kuh and Vesper (1997) found student interaction with faculty increased between 1990 and 1994. However, doctoral granting institutions saw a decrease in student faculty interactions (Kuh & Vesper, 1997).

On campuses where faculty recounted high student-faculty course-related interaction, students reported being engaged in higher levels of active and collaborative learning and being more challenged. Out of class interaction between students and faculty provided no benefits (Umbach & Wawrzynski, n.d.). In addition, casual, out-of-class contact with faculty members was shown to do little to influence learning (Kuh, 2003). Both first-year and senior students showed the largest gains in personal and social development and general knowledge on campuses with high student-faculty, course-related contact (Umbach & Wawrzynski, n.d.).

Institutional size was inversely related to student-faculty interaction for first year students. For senior students, institutional size was inversely related to student-faculty interaction, active and collaborative learning and perceptions of a supportive campus environment. The reputation of the graduate education at the institution was also negatively related to engagement of seniors (Pike, Kuh, McCormick, Ethington, & Smart, 2010).

The 2011 NSSE survey found that the majority of both freshmen and seniors either sometimes, often, or very often engaged in activities that defined

interaction with faculty. Table 4 shows the percentage of students who reported interacting with faculty members either sometimes, often or very often.

Table 4

NSSE 2011 Percentages: Interaction with Faculty

Question	Freshmen	Senior
Discussed grades or assignments with an instructor	92%	96%
Discussed ideas from your reading or classes with faculty members outside of class	59%	70%
Talked about career plans with a faculty member or advisor	75%	82%
Worked with faculty members on activities other than coursework	60%	53%
Worked on a research project with a faculty member outside of course or program requirements	69%	83%

Braxton et al. (2007) recommended that "institutions should involve faculty in programs and activities designed to reduce departure" (p. 385). Early student-faculty contact is important for students, especially those of color, and such out-of-class contact should continue beyond the orientation period.

Seven Principles for Good Undergraduate Education

In response to critical reports of higher education, Chickering and Gamson (1987) developed a list of seven principles that students and faculty could employ

to ensure students were making the most of the undergraduate experience. Kuh (n.d.) described the seven principles as "the best known set of engagement indicators" (p. 1). The seven principles include: (a) student-faculty interaction, (b) cooperation among students, (c) active learning, (d) prompt feedback, (e) time on task, (f) high expectations, and (g) respect for diversity. Guided by 50 years of prior research, Chickering and Gamson (1987) built their seven principles on six educational forces "activity, cooperation, diversity expectations, interaction and responsibility" (p. 4). The principles "help focus faculty, staff, students, and others on the task and activities that are associated with higher yields in terms of desired student outcomes" (Kuh, 2001, p. 1).

The first principle, interaction with faculty members, is the single most influential factor of student involvement (Chickering & Gamson, 1991), and as mentioned earlier, it is an important component to success and persistence (Tinto, 1998). Student-faculty interaction encourages students to think critically about themselves and their future and to augment their commitment to their education. Student-faculty interaction is beneficial for all students regardless of race, gender, or academic ability (Chickering & Gamson, 1987).

The second principle identified by Chickering and Gamson (1987) is "reciprocity and cooperation among students" (p. 4). In addition to interaction with faculty, cooperative learning increases levels of involvement. Cooperative learning includes activities such as learning groups, peer tutors, and learning communities (Chickering & Gamson, 1987). Like cooperative learning, the third

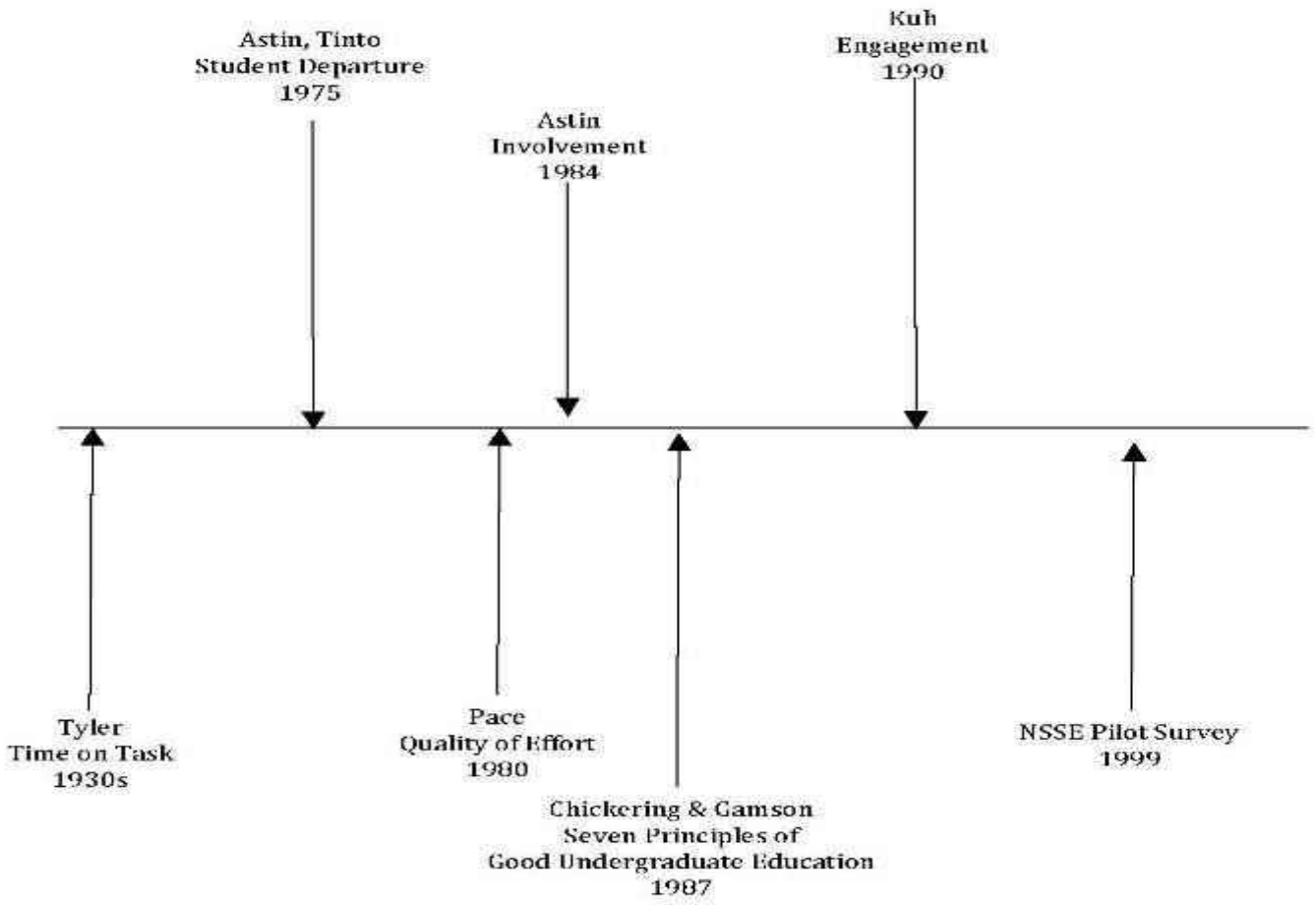
principle of active learning encourages students to be active and not to be passive agents in the learning process. Active learning is comprised of students talking about, writing about, and applying what they have learned. Active learning occurs outside of the classroom, taking the form of internships and independent studies. In addition, active learning can permit students to assist in the design and facilitation of learning within various classes (Chickering & Gamson, 1987). Chickering and Gamson (1991) viewed cooperative learning as a subset of active learning along with cooperative or collaborative learning. The distinguishing feature between the two principles is that active learning can be done alone but cooperative or collaborative learning cannot (Chickering & Gamson, 1991). Kuh (2009) combined active and collaborative learning into one NSSE benchmark.

The fourth principle, giving prompt feedback, helps student focus their learning efforts (Chickering & Gamson, 1987). Feedback allows students to reflect on what they have learned and to give them an opportunity to gauge themselves and their learning. The next principle emphasizes the time students spend on tasks. Time is one of the most valuable resources students have and they need to learn to use it strategically. In order to master certain tasks, time needs to be invested in learning (Chickering & Gamson, 1987).

Chickering and Gamson (1987) stressed the importance of setting the bar high enough. It was their belief that students of all races will achieve more when they are expected to achieve more. It is noteworthy that the National Survey of

Student Engagement combined time on task and expectation to make up the academic challenge benchmark. The final principle of Chickering & Gamson's (1987) seven principles of good undergraduate education was respecting diverse talents. Each student learns differently and when students are given the opportunity to express their unique talents and learning styles, they are able to learn more. Examples of this principle include individualized degree programs and contract learning (Chickering & Gamson, 1987).

The evolution of student engagement is presented in Figure 1. This timeline contextualizes the theory of student engagement and the NSSE survey, within the larger framework of pertinent student development theory.



Note. Adapted from *Interdisciplinary studies students' academic and social engagement: A qualitative study* (p. 27), by J. Simmons, 2011, Orlando, FL. Copyright 2011 by J. Simmons. Adapted with permission (see Appendix A).

Figure 1. Evolution of Student Engagement Theory

National Survey of Student Engagement (NSSE)

Chickering and Gamson's (1987) seven principles for good undergraduate education guided Kuh's (2003) development of the NSSE survey. Table 5 shows the relationship between Chickering & Gamson's seven principles (1987) and the NSSE benchmarks.

Table 5

Relationship Between Seven Principles for Good Undergraduate Education and NSSE Benchmarks

Seven Principles	NSSE Benchmarks
Encourages Active Learning	Active and Collaborative Learning
Encourages Cooperation	Active and Collaborative Learning
Encourages Faculty Contact	Interaction with Faculty
Gives Prompt Feedback	Interaction with Faculty
Emphasizes Time on Task	Academic Challenge
Communicates High Expectations	Academic Challenge
Respects Diverse Talents	Enriching Educational Experiences

Since the 1970s, there have been instruments to measure student engagement, most notably the College Student Experience Questionnaire (CSEQ), Cooperative Institutional Research Program survey (CIRP), and the College Senior Survey. Erwell (2002), encouraged by the Pew Research Center to create a method to measure engagement, developed a rough foundation for

the NSSE. In 1999, the Indiana University Center for Postsecondary Research, guided by Kuh, piloted two different instruments at 80 institutions of higher education. A year later, the first NSSE survey was administered to 276 colleges and universities. For the first three years, prior to the instrument's becoming self-sustaining, PEW underwrote the cost of the survey. At the time of the study, costs associated with administration of the instrument were currently being controlled by administering the survey online, increasing the number of fee paying institutions, and through grants (Kuh, 2009a).

The NSSE survey has been administered on campuses in both the United States and Canada. The 85-question survey was "specifically designed to assess the extent to which students are engaged in empirically derived good educational practices and what they gain from their college experience" (Kuh, 2001, p. 2). The purpose of the survey was three-fold. The first purpose of the NSSE survey was to collect and provide data to make meaningful institutional improvements. The second purpose was to document good practices, and the third purpose was to serve as a means for advocacy (Kuh, 2009a). The instrument measures data obtained in five categories: (a) student participation in educationally purposeful activities, (b) institutional requirements, (c) student's perception of the college environment, (d) perception of educational and personal growth, and (e) demographic information. From these categories, the NSSE allows for the demonstration of five benchmarks: (a) academic challenge, (b)

active and collaborative learning, (c) enriching educational experiences, (d) interaction with faculty, and (e) supportive institutional environment.

Critiques of NSSE

Although the NSSE has been widely used by institutions since 2000, it has had its critics. Olivas (2011) was quoted as saying “No good deed goes un-assessed these days” (p. 1). Although the NSSE survey was initially designed to answer the call for increased accountability, it has resulted in a substantial growth in assessment. Olivas (2011) has alluded to this as the “worst of times” (p. 1) in higher education. Kuh (2003) also acknowledged that the NSSE survey is not without its flaws. He reported that one of the shortcomings of the NSSE instrument is that it can only gauge the quantity of an activity and not the quality of an activity.

The NSSE survey has most recently been criticized relative to its reliability and validity and for its inability to measure student effort. Dowd, Sawatzky, and Korn (2011) argued that the NSSE instrument is designed to give institutions a better understanding of their students’ college engagement experiences. However, the NSSE does not currently provide information on student effort. Moreover, information derived from the NSSE suggests that student effort and institutional responses are culturally and racially neutral. In other words, engagement theory does not take into consideration the experiences of minority students and the effort they must expend to offset discrimination or differentiated

opportunities. Since the NSSE cannot measures the impact of such efforts, results from the survey might present institutions with an incomplete picture of their campus. Some researchers have purported that the survey's scope is too narrow and overlooks common worst practices campuses engage in that alienate students (Dowd et al., 2011). Dowd et al. (2011) proposed that student effort needs to be framed within "intercultural and economic constraints" (p. 38). These researchers have identified a need to revise popular student development theories such as involvement and engagement, and develop instruments that can assess involvement as well as engagement.

Dowd et al. (2011) also called into question the validity and reliability of the NSSE survey (Campbell & Cabrera, 2011; Porter, 2011). The validity of student experience surveys is paramount because if the survey is not measuring what researchers believe it is measuring, "the knowledge of college students is flawed" (Porter, 2011, p. 45). Porter (2011) disputed the validity of the NSSE survey on four bases: background, content, response process, and internal structure. The background, or basis, of the survey rests on the assumption that students can accurately report their own behavior. Based on Porter's (2011) survey of human cognition literature, he concluded students were not able to accurately report on themselves. In addition, Porter (2011) found an incompatible relationship between the NSSE benchmarks and external data. Porter (2011) also questioned the content validity because of the broad and ambiguous domains, lack of theoretical identification for why items were

selected, and little explanation about why items were or were not included in the survey.

The response process was also questioned by Porter (2011). He was not confident that students knew exactly what they were being asked and that the understanding of what was being asked was consistent across students. For example, the survey asks about the frequency of interaction with an instructor. Porter (2011) highlighted the vague nature of the term, instructor, and suggested it could be construed to refer to different statuses including: professors, graduate students who teach, and teaching assistants. In addition, he noted that the Likert scale terms, very often, often, and occasional are often interpreted by students differently. Porter (2011) also suggested that students most likely do not have an accurate estimation of how many times over the course of an academic year they have engaged in a particular behavior. The NSSE operates under the assumption that since students have no reason to give a false response that they will not. However, Porter (2011) demonstrated that students deliberately falsify responses to make themselves look better. Finally, Porter (2011) questioned the validity of the NSSE survey because researchers had difficulty replicating benchmarks.

Campbell and Cabrera (2011) corroborated Porter's concerns and also questioned the validity and reliability of the NSSE survey. Like Porter (2011), they questioned NSSE's ability to be replicated, the accuracy of student responses, the association with student outcomes, and the inter-correlation of

benchmarks. However, Campbell and Cabrera (2011) investigated whether NSSE benchmarks predicted student outcomes and found that the five NSSE benchmarks were not valid at an institutional level. In addition, they found large overlap between variables, specifically active and collaborative learning and interaction with faculty. Furthermore, they noted that the benchmarks were not good predictors of student outcomes. Olivas (2011), Porter (2011), and Campbell and Cabrera (2011) each advocated for additional research on the validity of the NSSE survey and suggested that the instrument may need to be amended in order to produce a survey that allows colleges to gain a better, more robust picture of the college student experience.

Research utilizing the NSSE

Research findings linking NSSE scores with educational outcomes have been mixed. Kuh (2001) correlated the benchmarked scores on the NSSE survey with grade point averages and demonstrated that higher GPAs were coupled with high levels of engagement. Erwell (2002), however, found the correlation between NSSE scores and GPA to be weak. The findings of Carini, Kuh and Klein (2006), revealed that the five NSSE benchmarks, when assessed together, provided statistically significant predictions of college GPA. When examining the benchmarks separately, however, no such significance was found. Problems with previous correlation studies are plentiful. First, college GPAs vary as a function of many factors, including courses taken and inconsistent faculty

grading (Campbell & Cabrera, 2011). Second, the self-reported data collected by NSSE provide only a limited picture of institutional effectiveness. Students can easily over inflate or under inflate their abilities measured by the survey. Third, whereas the NSSE survey captures a moment in time, GPA information is collected throughout the college experience. Fourth, most studies correlating NSSE and GPA are not longitudinal and do not follow the same students over the course of their college career (Campbell & Cabrera, 2011). The reliability of the instrument is adequate however, with four of the five NSSE benchmarks demonstrating a strong internal consistency reliability of >.5 (Kuh, 2003).

Despite the criticisms of the NSSE survey, engagement is still an important link in the student success puzzle. The NSSE survey is one way to study the "relationships between key student behaviors and the institutional practices and conditions that foster student success" (Kuh et al., 2007, p. 5). Pascarella, Seifert and Blaich (2010) found linkages between the NSSE benchmarks and students' intellectual and personal development. Additionally, they found that the NSSE survey did measure student and institutional behavior.

> Institutions using the NSSE can have reasonable confidence that the benchmark scales do, in fact, measure exposure to experiences that predict student progress on important educational outcomes, independent of the level on these outcomes at which an institution's student body enters college (p. 15).

Institutions confident in NSSE's findings have the ability to compare their benchmarked scores against national averages and other institutions. Without NSSE collecting and analyzing the data, few if any institutions would be collect this type and volume of data (Swerdzewski, Miller & Mitchell, n.d.).

Student Athletes

Athletics was not a part of American higher education until Harvard established its own gymnasium in 1826, almost 200 years after its founding (Brubacher & Rudy, 1999). The gymnasium concept was borrowed from the German model. Harvard hired a German instructor to teach basic principles of exercise and to "work the devil out of the students" (Brubacher & Rudy, 1999, p. 49). Before the Civil War, the idea of exercise and the gymnasium had spread to numerous universities throughout the country. Early athletic contests pitted classes against each other at a single institution. In the post-Civil War era, the popularity of athletics took off (Brubacher & Rudy, 1999).

Early intercollegiate athletics was organized, managed, and governed by students (Eitzen & Sage, 2003; Smith, 2011). The original model of governance for American intercollegiate athletics was derived from England's secondary school model: athletics were for the students and run by the students. The first intercollegiate contest was a rowing regatta held between Harvard and Yale in 1856 (Smith, 2011). Intercollegiate athletics grew quickly. The first baseball game was held in 1859, and the first football game was held 10 years later in

1869 between Princeton and Rutgers. Other schools, like Columbia, quickly caught on and fielded their own teams (Crowley, 2006). Faculty members strongly opposed this sort of competition and actually had football banned in 1871 (Grant, Leadley, & Zygmont, 2008).

The disbandment was short lived, however. Two years later, students from Yale, Princeton, and Rutgers met to develop a formalized set of rules to govern football (Grant et al., 2008). Shortly thereafter, in 1876, the Intercollegiate Football Association was formed. Even though the association was formed, students and more importantly alumni were in charge of the "athletic clubs" (Fleisher, Goff & Tollison, 1992) and what would today be thought of as the athletic departments (Gerdy, 2006; Grant et al., 2008).

The 1880s proved to be a turning point for athletics and ushered in the era of "big-time" college sports. In 1881, the faculty at Princeton University organized a committee to discuss what they saw as growing problems in their intercollegiate athletic program. By 1883, a cohort of faculty from several universities gathered to discuss common problems they each faced and how to keep education at the center of athletics (Bowen & Levin, 2003). It was around this time that student athletes were becoming "player students" (Bowen & Levin, 2003, p. 43). In addition to the growing concern over the place of athletics in education, specialized training and equipment, as well as, the knowledge of a specialized coach, subsequently defined college athletics. Escalating costs were covered by alumni or by admission into athletic contests. At this time, most

college presidents embraced intercollegiate athletics as a medium to market their universities (Brubacher & Rudy, 1999).

The original purpose of athletics in American higher education was to redirect the youthful energy of students. Athletics was originally viewed as an outward expression of a man's inward character and expression of Christian masculinity (Karabel, 2005). These values were quickly overshadowed by the notion of manliness. Charles Eliot, president of Harvard, credited athletics "with transforming the 'ideal student. . . from a stooping, weak, and sickly youth into one well-formed, robust, and healthy'" (Karabel, 2005, p. 42). He quickly recanted his belief when he realized intercollegiate sports were becoming increasingly violent and unsportsmanlike (Karabel, 2005).

It was the reports of significant injuries that spurred Theodore Roosevelt, who had tried out for the football team at Harvard, to convene with a group of 13 college presidents to work on football reform initiatives in order to keep players healthy (Crowley, 2006; Fleisher et al., 1992; Karabel, 2005). Initially, it was assumed that athletics would support and reinforce the educational mission of the university rather than undermine it (Gerdy, 2006). A second meeting was held with representatives from 62 institutions, and the Intercollegiate Athletic Association of the United States was formed in 1905 (Grant, 2008). It would not be until 1910 that the name was changed to the National Collegiate Athletic Association (NCAA) (Grant, 2008).

In 1929, the Carnegie Foundation for the Advancement of Teaching produced a report to assess the current state of intercollegiate athletics. The report focused on topics such as administrative control, coaching, recruiting, commercialization and professionalization, and the values of the enterprise (Smith, 2011; Thelin, 1996). In the report, it was concluded that the current conditions found in intercollegiate athletics "muted any claims that big-time college sports had any educational value" (Thelin, 1996, p. 25). In essence, athletics had lost its connection to the academic side of university life. Athletes, given their grueling schedules, would find "no time or energy for serious intellectual effort" (Thelin, 1996, p. 26). The victims, the report expressed, were the student-athlete, who had dwindling influence on the system.

In the late 1940s and early 1950s, college athletics saw its share of scandal through rumors of point-shaving and player gambling. The American Council on Education, a group of college presidents, created an 11-person committee to outline athletic reform. The group sent recommendations to the NCAA in 1952 that "intercollegiate athletics. . . was a valuable part of a well-rounded program of higher education" (Smith, 2011, p. 118). To achieve greater integration of athletics within the university, the committee outlined 12 recommendations including changes to admissions standards, eligibility, length of season, pay of coaches, and governance. The American Council on Education had no power to enforce such measures, and looked to the NCAA to implement their recommendations. At the same time, the American Council on

Education also wanted enforcement through college accrediting bodies. Enforcement, however, never came to fruition (Smith, 2011).

Nearly 40 years later, in 1989, the Knight Foundation Commission on Intercollegiate Athletics was formed to propose collegiate athletic reform. A total of 14 current or former college presidents made up the commission which focused on three areas for its initial report--academic integrity, financial integrity and certification (Knight Foundation Commission on Intercollegiate Athletics, 1993; Smith, 2011). The first report, published in 1993, highlighted the current state of college athletics, including low graduation rates, low academic standards and the independence of athletic departments (Knight Foundation Commission on Intercollegiate Athletics, 1993). The commission pushed for reform focus on the well being of the student athlete, arguing that other subsequent problems would resolve themselves. In 2001, the Knight Foundation Commission released a second report questioning the relationship of college sports with the university "as a place of learning" (Knight Foundation Commission on Intercollegiate Athletics, 2001, p. 10). Athletic departments were still operating separately from their host institutions and were degrading the entire culture of higher education. In 2010, a third report was released questioning the financial integrity of intercollegiate athletics and called for the arms race of spending to cease (Knight Foundation Commission on Intercollegiate athletics, 2010).

As a result of the commission's reports, the NCAA enacted a progress toward degree measure (APR), in addition to a minimum GPA requirement for

upper class student athletes. Furthermore, graduation rates were made a criterion for NCAA certification in congruence with the commission's recommendations. The NCAA further strengthened its admissions requirements from 11 core courses to 13 core course requirements (Knight Foundation Commission on Intercollegiate Athletics, 2001; 2010).

Impacts of Intercollegiate Athletics Participation

Positive Impacts of Athletic Participation

Participating in intercollegiate athletics affords participants numerous benefits. First, participating in intercollegiate athletics has been positively correlated with a greater motivation to complete degree (Astin, 1993; Pascarella & Smart, 1991; Pascarella & Terenzini, 2005; Ryan 1989). In their study, Potuto and O'Hanlon (2007) corroborated these earlier findings by discovering 93% of respondents believed it was important to graduate from college, and 75% indicated that they would have attended college without athletics. In addition, African American student athletes who earn a bachelors degree have been determined to be twice as likely to earn a graduate degree (Ryan, 1989). However, Shulman and Bowen (2001) found that male student athletes were less likely to earn a graduate degree than female student athletes. They also determined that at selective institutions, student athletes graduated at a higher rate than non-athletes as a result of being more engaged with the institution.

In addition to enhancing the students' motivation to complete their degrees, participation in intercollegiate athletics has been positively correlated with development of leadership and interpersonal skills (Astin, 1993; Pascarella & Smart, 1991). Moreover, intercollegiate athletics has been positively associated with satisfaction with the overall college experience (Astin, 1993).

Negative Impacts of Athletic Participation

Though participating in intercollegiate athletics has numerous benefits for its participants, there are also several harmful impacts. A growing concern of researchers has been in regard to the influence of intercollegiate athletics on a student athlete's academic capabilities (Pascarella & Terenzini, 2005). In terms of verbal, quantitative, and subject matter competence, intercollegiate athletics has a larger negative effect on male athletes than it does on female athletes (Pascarella et al., 1999). In addition, participating in revenue generating sports has been shown to have a negative impact on cognitive outcomes (Pascarella et al., 1999). After their first year, revenue sport athletes were shown to be at a significant disadvantage as compared to non-athletes in reading scores (Pascarella et al., 1999). Those differences became even more pronounced after the second and third years of college. Both Anaya (1999) and Astin (1993) found intercollegiate athletic participation resulted in a statistically significant negative impact on GRE verbal scores and LSAT scores. Furthermore,

intercollegiate athletic participation has been found to have a negative impact on student athletes taking the National Teachers Exam (Anaya, 1999).

Only a small number of studies have been conducted on the impact on critical thinking skills of participating in intercollegiate athletics (Pascarella & Terenzini, 2005). McBride and Reed (1998) found that student athletes scored lower in critical thinking skills and had a lower predisposition to actually demonstrate critical thinking. Additionally, revenue sport athletes were shown to be at an increased deficit when compared to non-revenue sport athletes. However, Pascarella, Bohr, Nora, and Terenzini (1995) found that when pre-college characteristic controls were put into place, few differences existed between student athletes and non-athletes after their first year. Following up on earlier work, Pascarella and Terenzini (2005) similarly found no significant differences between women student athletes and non-athletes and between male non-revenue sport athletes and male non-athletes. However, revenue sport athletes did show less positive cognitive and intellectual growth than male, non-athletes (Pascarella & Terenzini, 2005).

Intercollegiate student athletes accrue numerous costs and benefits for participation in intercollegiate athletics. Participation in intercollegiate sports is linked to a heightened motivation to complete a degree (Astin, 1993; Pascarella & Smart, 1991; Pascarella & Terenzini, 2005; Ryan 1989). Student athletes have been shown to graduate at rates higher than the aggregate student body (Bowen

& Levin, 2003; Shulman & Bowen, 2001; Watt & Moore, 2001), despite the negative effects of participating in college sports.

Athletic Divisions

Williams et al. (2006) stated that the level of NCAA competition influences the type of experience the student athlete has in college. Over 430,000 student athletes participate in one of the NCAA's three athletic divisions (NCAA, 2011h). Division membership has been a function of several factors including number of sports, type of scholarships offered, and scheduling restrictions.

Division I institutions have a minimum of 14 varsity sports, with at least seven being women's sports. In addition, each Division I institution must provide opportunities for participation in each athletic season (fall, winter, and spring). When creating schedules, Division I schools must compete against a minimum number of other Division I institutions. That benchmark, however, varies by sport. Each Division I institution must abide by specific financial aid guidelines, offering partial or full scholarships within a specific range. In 2011, there were 335 institutions categorized as Division I, with 66% being public universities (NCAA, 2011d).

In 2011, there were over 300 institutions that comprised the NCAA's Division II athletic division. Division II institutions must compete in a minimum of 10 sports. Competition in this division is meant to be regional in nature with the NCAA granting championship status to winners in each geographic region. Most

student athletes competing at Division II institutions do not receive full scholarships. Some student athletes, however, will receive some financial aid. Those who do not receive scholarship money must pay their own educational expenses. The majority of Division II schools are smaller, public institutions with an average enrollment of 4,500 students (NCAA, 2011d).

The final NCAA division, Division III, is comprised of 432 member institutions. Division III institutions do not award athletic scholarships of any kind to any of their student athletes. A total of 81% of member institutions are small, private colleges. Typically, student athletes make up nearly one-third of the entire student population within their institutions. Nearly 40% of all NCAA athletes compete at the Division III level (NCAA, 2011d).

Graduation Rates for Student Athletes

Student athletes in each of the NCAA's athletic divisions graduate at a higher rate than their non-athlete counterparts (Bowen & Levin, 2003; Shulman & Bowen, 2001; Watt & Moore, 2001). This is not true, however, for all subsets within the student athlete population. Male student athletes graduate at a lower rate than female student athletes, and team sports have a lower graduation rate than individual sports (Le Crom, Warren, Clark, Marolla, & Gerber, 2009). Additionally, Division III schools have been shown to report the highest graduation rates for student athletes (Urban, 2000).

In 2011, the NCAA reported that graduation rates for student athletes were at an all-time high. The graduation success rate, a graduation rate not including transfers or those students who leave in good academic standing, was 82% for student athletes as a whole. This equates to a federal graduation rate of 65%. In 2011, the federal graduation rate for men's basketball players continued to decline, decreasing to 45% (NCAA, 2011a), but the graduation rate for football players remained steady at 56% (NCAA, 2011a). Division II student athletes showed a decline from 56% to 55% in graduation rates (NCAA, 2011e). Division III athletes showed improvement in their graduation rates, increasing by 2% to 65% (NCAA, 2011b). Female student athletes graduated at 65% while male had an overall graduation rate of 60% (NCAA, 2011a). African American, male student athletes had a graduation rate of 50% and 66% for African American women. On the other hand, white males had a graduation rate of 62% and white women had a graduation rate of 74% (NCAA, 2011a).

Engagement of Student Athletes

"One of the most important factors in student learning and personal development is student engagement" (Gaston-Gayles & Hu, 2009, p. 316). Student engagement is a formula, taking into account a student's individual efforts as well as the institutional environment (Astin, 1999, Kuh 2001, Pace 1984, Pascarella & Terenzini, 2005). "In order to not be disengaged from the educational mission of the institution, student athletes must participate in the

education and social experiences of college life" (Unruh, 1999, p. 21). Umbach et al. (2006) found that student athletes were just as engaged in "educationally purposeful activities" (p. 718) as non-athletes.

Unruh (1999), studying 32 Division I football and basketball programs, found that athletic departments with high persistence and high performance, or high performing athletic departments had several key similarities. First, they recognized the academic success of the athletes and showed interest in their academic lives. Second, in high performing high persistence institutions, student athletes felt strong support from faculty members in both their academic and athletic lives. Third, the athletic department provided support services to help them fit into the culture of the university through orientation and freshman programs. Fourth, student athletes in these institutions believed that coaches were honest with them during the recruitment process about academic expectations and requirements, and they talked to their coaches about their academic lives. They reported their coaches often discussed with their athletes the responsibilities of college life and were interested in their academic performance (Unruh, 1999). Martin, Harrison, Stone, & Lawrence (2010) corroborated these observations by finding student athletes at selective Pac-Ten institutions were equally or more engaged in the university than their non-athlete peers.

Active and Collaborative Learning

Engaging in active and collaborative learning activities is positively associated with social integration and institutional commitment (Braxton et al., 2006). Hathaway (2005), comparing student athletes with non-athletes, found no overall differences in active and collaborative learning when investigating engagement at a Midwestern Division I institution. Williams, Sarraf and Umbach (2006) found that both male and female student athletes were more engaged in active and collaborative learning than their non-athlete peers, when examining nearly 67,000 student athletes in Division I. However, Umbach et al. (2006), using the NSSE results of over 57,000 students across athletic divisions, found that while the levels of active and collaborative learning were comparable for male student athletes and non-athletes, female student athletes demonstrated higher levels of active and collaborative learning than female student non-athletes. Additionally, student athletes and non-athletes were seen to spend equivalent time on group work (Hathaway, 2005). Symonds (2006), who studied over 600 students and athletes at a Midwestern, Division II institution, found student athletes spent more time working on group projects outside of class than non-athletes. When analyzed by sport, revenue sport athletes participated more on group projects outside of the classroom than did non-revenue athletes (Symonds, 2006). Similarly, student athletes reported higher instances of giving class presentations than non-athletes with revenue sport athletes give more presentations than non-revenue athletes (Symonds, 2006). In addition, student

athletes as a whole were just as likely as their non-athlete counterparts to ask questions during class. Student athletes, however, were less likely to discuss class readings and materials outside of class with peers (Hathaway, 2005). However, student athletes participating in revenue generating sports were more like to respond than non-revenue sport athletes that they somewhat, often or very often interacted with study groups outside of class, as shown by Crawford (2007) in a study of 227 student athletes at a Division I institution.

Athletic division was determined to influence levels of active and collaborative learning. Males participating in Division III athletics were more engaged in more active and collaborative learning activities than Division I males. In contrast, Division III female athletes were shown to be less engaged in active and collaborative learning than both Division I and II females (Umbach et al., 2006).

Academic Challenge

Students are influenced by the expectations of the faculty and staff that surround them (Tinto, n.d.). In Symonds' (2006) study, student athletes were less likely to engage in challenging academic activities, e.g., higher order thinking skills, writing papers 9-15 pages in length, and writing papers 1-5 pages in length. Likewise, Hathaway (2005) found student athletes used fewer higher order thinking skills in addition to using fewer textbooks in class. In contrast, Wolniak, Pierson, and Pascarella (2001), who examined student athletes at 18

institutions, found male Division I revenue sport athletes made large gains in the use of higher order thinking skills over the course of their college careers and left the university with levels equivalent to non-athletes. Student athletes, however, demonstrated higher instances of academic preparation and writing papers in excess of 20 pages for class (Symonds, 2006). Hathaway (2005) arrived at conflicting results when she found student athletes spent less time preparing for class than non-athletes. When examined by athletic division, Division III student athletes showed greater amounts of academic challenge than student athletes in other divisions (Umbach et al., 2006)

Interaction with Faculty

Comeaux and Harrison (2007) suggested that students who are challenged tend to perform at a higher level in the classroom than those who are not challenged. Non-athletes showed higher instances of faculty interaction, e.g., discussing grades, future plans, and having relationships with faculty members, than did student athletes. Harrison et al., in their 2006 research on revenue sport athletes, found interaction with faculty positively associated with college GPA for college basketball players. The variables of faculty providing academic challenge by encouraging graduate school also had a significant effect on college GPA. Faculty encouraging professional achievement and respect from faculty had moderate impacts on college GPA. Finally, faculty who provided their

students with encouragement and opportunities to discuss coursework outside of class were also influential on college GPA (Comeaux, Harrison, & Plecha, 2006).

Student athletes, however, reported having more relationships with administrators than non-athletes (Symonds, 2006). In contrast, Umbach et al. (2006) reported male student athletes interacted with faculty members just as frequently as non-athletes. Female athletes, on the other hand, were more likely to interact with faculty members than their non-athlete counterparts. Bell (2009), who conducted 41 interviews at five, Division I institutions, found all but one student athlete interviewed had a relationship with at least one faculty member. The majority considered their relationships with faculty members to be strong and extended outside of the classroom. The student athletes Bell (2009) surveyed believed having strong relationships with faculty members improved their academic experience.

Crawford (2007) concluded that there was no documented difference in interaction with faculty member based on gender. The type of sport, however, did impact the amount of interaction a student athlete had with faculty. Revenue sport athletes more often discussed grades and assignments than non-revenue sport athletes. In addition, revenue sport athletes more often interacted with an advisor and discussed future plans with faculty or staff than non-revenue sport athletes (Crawford, 2007). Revenue sport athletes were nearly twice as likely to seek guidance from a faculty member. Class standing also impacted the likelihood of interacting with faculty, as upperclassman scored higher on

interaction than underclassmen athletes (Crawford, 2007). When examining interaction by athletic division, Division III student athletes interacted more with faculty than their counterparts in Divisions I and II (Umbach et al., 2006).

Involvement

Although Stone and Strange (1989) found that participation in intercollegiate athletics negatively impacted participation in "traditional sources of campus involvement" (p.153), other researchers have shown that student athletes are more involved on campus (Adler & Adler, 1991; Astin, 1999; Chen, Snyder, & Magner, 2010;Comeaux & Harrison, 2011; Miller & Kerr, 2002). Even though participating in athletics puts time demands on the schedule of the student athlete (Eiche, Sedlacek, & Adams-Gaston (1997), it did not prevent them from socializing with peers other than teammates (Shaunette & Aries, 1999). Student athletes have the ability to overcome time constraints. Stone and Strange (1989) found no difference in overall campus involvement between student athletes and non-athletes, but student athletes were less involved in music, art and theater, and Greek life. Student athletes were shown to be more involved in athletic and recreational activities (Stone & Strange, 1989). Astin (1999) explained that student athletes were no less isolated from the campus than other students who were very involved in their academics. Eiche et al. (1997) found that student athletes actually had an easier time adjusting to the social life on campus.

Hindrances to Engagement

Student athletes' engagement can be impeded by numerous factors that promote alienation. These include isolation, the athletic subculture, and discrimination by faculty.

Isolation

Social isolation is of particular concern because it has been shown to compromise educational attainment (Riemer, Beal, & Schroeder, 2000). According to Hurley and Cunningham (1984), "Loneliness affects academic and athletic performance, poor athletic performance affects academic performance" (p. 55). Furthermore, isolation can result in detachment from organization goals and result in students leaving the university. It promotes a subculture that can have negative impacts on academic success (Adler & Adler, 1991; Riemer et al., 2000). Social isolation was a common theme for each of the 30 female athletes interviewed by Riemer et al. (2000). Each group of student athletes interviewed reported to living only with athletes, and most of the peer interaction was with other athletes. "I spend so much time playing tennis and weight training and running and classes, like you really don't have time to hang out in the dorms and spend time with the people there. . . we are like such a closed group" (Riemer et al., 2000, p. 373). Another athlete commented, "So yes, it seems the athletes always seem to stick together and basically all the people I hang out with except maybe two or three are all athletes" (Riemer et al., 2000, p. 373).

Bell (2009) also reported that Division I football players felt distant (physically, socially, and emotionally) from the general student body. The student athletes she interviewed only interacted with non-athlete peers while attending class. The demands on their time were incompatible with the schedules of other students. When not in class, the football players spent their time at the athletic complex, which was often on the outskirts of campus, further isolating them from the rest of the campus. The student athletes also felt physically isolated in that they stood out from the rest of the student body due to their large stature (Bell, 2009). This corroborated the findings of Adler and Adler (1991) who found basketball players were easily distinguished from other students due to their height. "I'm 6'4", 310 pounds. . . There are so few of us and so many of [the] regular students, and then I think it is kind of easy to see a person as an athlete" (Bell, 2009, p. 107). However, at Division III institutions, Aries, Banaji, McCarthy, and Salovey (2004) found that student athletes were no more isolated from the campus than any other extracurricular group.

Subculture

A student's peer group is one of the largest influences on development and student learning (Astin, 1996). The athletic subculture has the potential to impact levels of academic challenge. Athletic subcultures develop on a campus for numerous reasons (Parham, 1993; Prentice, 1997; Sedlacek & Adams-Gaston, 1992). Sports teams develop athletic subcultures for socialization

purposes. Most of their social needs are met through interaction with teammates and other athletes. In Canada, the athletic subculture was much more receptive to an intellectual component and encouraged academic success (Miller & Kerr, 2002).

Nishimoto (1997) found that it is through this subculture that football players make meaning and construct their identities (Nishimoto, 1997). Football players talked about their team as a family and the unconditional support they found there. Being on the team created a sense of belonging and identity for the student athletes. Being a part of the team and the team's goals were often more important than their own. Much like fraternity initiation, younger football players were expected to pay their dues and endure hazing rituals (Nishimoto, 1997). The athletic subculture created an 'us versus them' mentality when the football players believed themselves to be stereotyped by professors or fellow classmates (Bell, 2009; Nishimoto, 1997).

An athletic subculture can be dangerous. In their study, Adler and Adler (1985) found the athletic subculture "subverted academic orientations by discouraging them from exerting effort in academics" (p. 246) and contributed to academic underperformance (Shulman & Bowen, 2001). However, Aries et al. (2004) found that at highly selective institutions those in the athletic subculture were just as likely to study, be ambitious, and be grade conscious as other students at the university.

Discrimination

Discrimination can lead to alienation by subverting academic integration and decreasing interaction with faculty. According to Mann (2001), degrees of alienation or engagement are ways to analyze the student learning experience. Student athletes face prejudice from both faculty members, and this can negatively influence the desire to interact with faculty (Baucom & Lantz, 2001; Bell, 2009; Engstrom, Sedlacek, & McEwen, 1995; Nishimoto, 1997; Potuto & O'Hanlon, 2007; Simons et al., 2007). Faculty members were seen as holding or showing negative attitudes toward student athletes by giving a lower grade than deserved, being accused of cheating, and failing to provide accommodation due to games or practice. Male student athletes were seen more negatively by faculty than female student athletes (Simons et al., 2007). Non-athlete students were just as discriminatory. Nearly 40% of student comments centered on a theme expressing that athletes did not deserve to be at the particular institution (Simons et al., 2007).

Engstrom et al. (1995) also found faculty members held prejudicial feelings toward both revenue sport and non-revenue sport student athletes. Faculty showed less positive feelings toward student-athletes' academic abilities than those of non-athletes. Additionally, they expressed anger toward the privileges afforded to student athletes. Similarly, faculty members expressed a greater amount of anger for student athletes who were recognized on campus for their athletic achievement. Faculty members felt more anger toward student-

athletes who were categorized as “on full scholarship” and “admitted with lower SAT scores” than non-athletes who were categorized in the same way. Furthermore, faculty members expressed more suspicion when a student-athlete received an A. Faculty members, however, held a more positive view of student athletes who progressed slower toward their degree than a general student at the same pace (Engstrom et al., 1995).

In Bell’s (2009) study, the majority of athletes interviewed believed the other students on campus perceived them as “dumb jocks.” “It is hard being a student-athlete because people do perceive you as being dumb and all you care about is football” (Bell, 2009, p. 85). The football players found this stereotype to be discouraging. Stereotypes can have negative impacts on academic performance when a student begins to identity with the stereotype (Steele & Aronson, 1995).

Student athletes have responded to this stigmatization by either accepting or rejecting the stigma. Those who wanted to reject the stigma reported the desire to work harder. Those who accepted the stereotype did so by not participating in class, dropping the class, or not attending. Student athletes have tried to work around the stigma by not revealing their status to professors. Almost half tried at some point to hide that they were student athletes (Simons et al., 2007).

Similarly, Martin et al. (2010) found African American athletes at selective universities in the Pac-Ten believed they had to prove they were serious about

being students. “They figure since I’m black and an athlete, I probably don’t have much to say and that I’m just trying to stay eligible” (Martin et al., 2010, p. 138). The researchers found that the student athletes they studied worked extra hard to be prepared in class and manage their time wisely to debunk the dumb jock stereotype. African American student athletes believed, to some extent, that they were a double minority and had to combat two sets of stereotypes for being both an athlete and black (Eitzen & Sage, 2003; Potuto & O’Hanlon, 2007; Sellers, Kuperminc., & Damas, Jr., 1997). African American student athletes in the Pac-Ten faced harsher prejudice from other African American students who thought that student athletes had not had to work as hard as they to gain admission (Martin et al., 2010).

A student athlete’s peer group and relationships with faculty and coaches can strongly influence their college experience. In order for student athletes to be successful, they need to overcome several barriers that can impede academic success. However, Martin et al. (2010) found that student athletes can overcome these obstacles and be successful on the field and in the classroom.

Collegiate Level Basketball

Thirty-year-old, seminary student, James Naismith developed the game of basketball in 1890 (ESPN, 2009; Isaacs, 1984). A local school asked Naismith to design a game that (a) could be played between the seasons of football and baseball and (b) gave kids who were bored with gymnastics something to do

during gym class (Isaacs, 1984). The first formalized game was played on December 21, 1891. The following year, Young Men's Christian Associations (YMCAs) adopted the game and spread it around the country (Isaacs, 1984). Naismith toured the country with his new game, and it was during this exhibition period that colleges became interested in fielding their own teams. Vassar and the University of Chicago became the first colleges to field teams. In the early 1900s, college teams competed against club teams and YMCAs. Around the same time, basketball teams were also springing up at Historically Black Colleges and Universities (HBCUs) and women's institutions. By 1905, the first college champion was crowned. Around this time, several leagues formed. These included the Eastern Intercollegiate League, the Western Intercollegiate League, the IVY League, and the Southern Intercollegiate Athletic Association (Isaacs, 1984).

Prior to the 1950s, NCAA basketball was an all-white sport. African American students at HBCUs played in their own league but did not compete on the same court as white students (ESPN, 2009). In 1944, Duke University and the North Carolina College (NCC) for Negros played a "secret game" (ESPN, 2009, p. 15). At the time, it was against North Carolina law for such event to take place. NCC beat Duke by 44 points. After the game, the players made two, integrated teams and played a pickup game (ESPN, 2009).

Once African Americans were allowed to participate at NCAA institutions, universities had a gentleman's agreement to not play more than three African

American players at one time. In 1962, Chicago-Loyola violated this agreement and played four African American players at one time. Three years later, the first African American player played for an Atlantic Coast Conference team (ACC), and in 1967 the first African American player took the court of a Southeastern Conference (SEC) team (ESPN, 2009). By 1971, the All-American basketball team was comprised solely of African American players (ESPN, 2009).

One of the most controversial subjects in modern day college basketball is the "one and done" rule. The rule, actually a National Basketball Association (NBA) rule, states that NBA teams cannot draft a player until the age of 19 or one year out of high school. The NBA has been largely criticized both inside and outside of college basketball. No one is more critical than NCAA president Mark Emmert. In 2012, he was quoted in an interview with Weiss of the *New York Daily News* as follows:

> I happen to dislike the one-and-done rule enormously and wish it didn't exist,' Emmert said last month during a panel discussion hours before the Midwest Regionals in St. Louis. 'I think it forces young men to go to college who have little or no interest in going to college. It makes a travesty of the whole notion of student as an athlete (p. 1).

Cherner (2012) shared NBA commissioner David Stern's response to this criticism in a *USA Today* article:

> A college could always not have players who are one and done. They could do that. They could actually require the players to go to classes. Or

> they could get the players to agree that they stay in school, and ask for their scholarship money back if they didn't fulfill their promises. There's all kinds of things that, if a bunch of people got together and really wanted to do it, instead of talk about it. . . . (p. 1)

Figure 2 presents a graphic display of key dates and events in the growth of the sport from the beginning of the game 1891 up until the present. At the time of the study, there were over 2,600 men's and women's basketball teams in each of the three NCAA divisions, and these teams represented over 31,000 basketball players playing college basketball at any given time of the year. In 2009, the NCAA signed a $6 billion contract with the CBS network to televise the NCAA tournament (ESPN, 2009). The annual championship tournament brings in the highest revenue of any college sporting event.

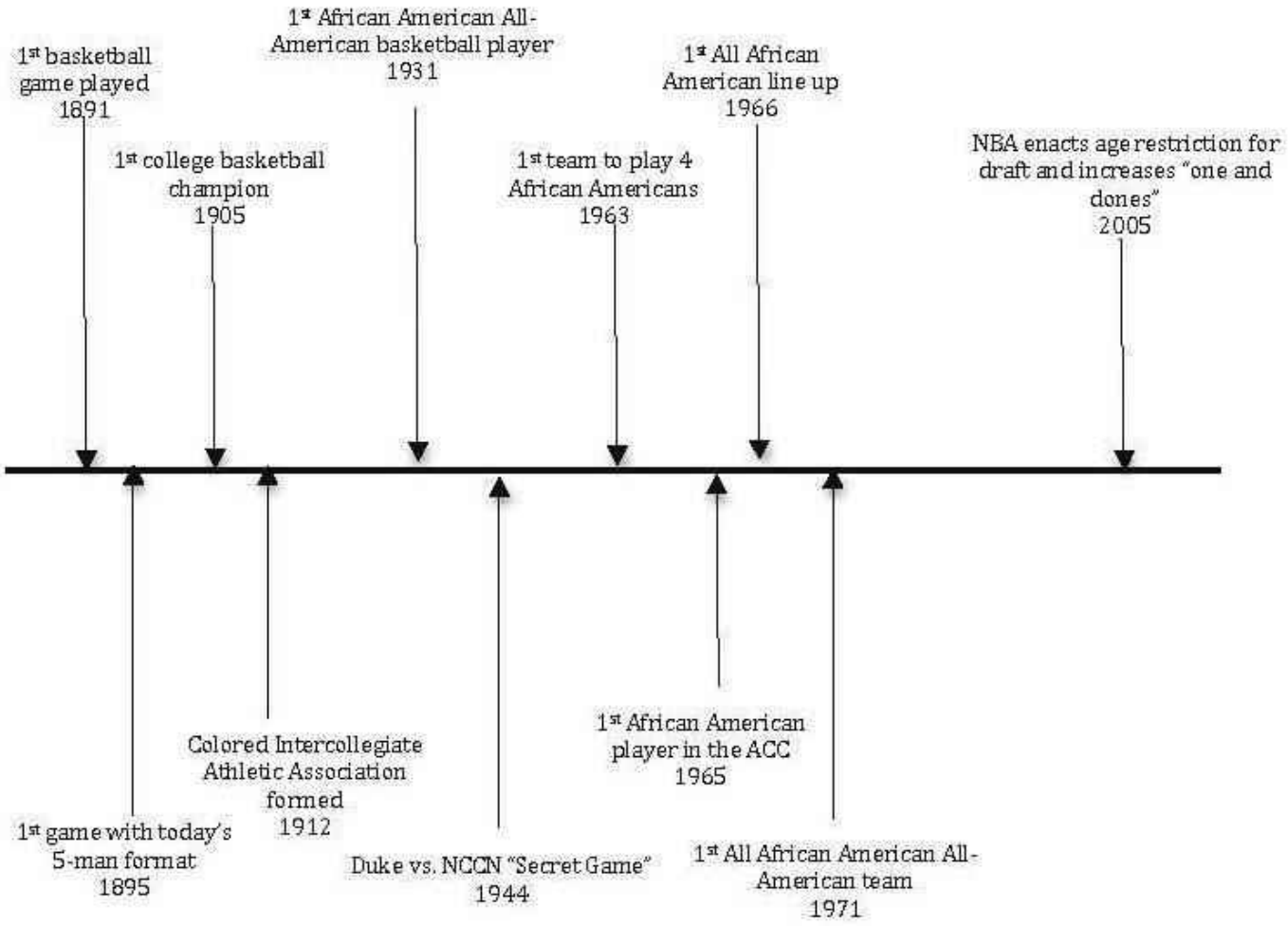


Figure 2. Key Dates in College Basketball

Research on College Basketball Players

The profile of NCAA college basketball players is diverse. The 345 Division I basketball teams are comprised of over 4,000 basketball players. Likewise, there are over 4,000 basketball players in Division II. African Americans are the predominate group in both Division I and Division II basketball followed by Whites and non-resident aliens (NCAA, n.d.a; NCAA, n.d.b). Table 6 shows the racial demographics in Division I and Division II basketball for 2010-2011.

Table 6

Racial Composition of Divisions I and II Basketball: 2010-2011

	Division I		Division II		Total	
Race	n	%	n	%	n	%
African American	2,523	61.9	2,124	52.2	4,647	57.1
American Indian	9	.2	20	.5	29	.4
Asian	6	.1	16	.4	22	.3
Hispanic	75	.8	122	3.0	197	2.4
Non-Resident Alien	324	8.0	167	4.1	491	6.0
Pacific Islander	5	.1	7	.2	12	.1
Two or More	74	1.8	68	1.7	142	1.7
Unknown	204	5.0	226	5.6	430	5.3
White	853	20.9	1,316	32.4	2,169	26.6

Note. Percentages may not total 100% due to rounding.

The 2011 federally reported graduation percentage rate for Division I basketball players was 45%, which equates to a 66% graduation success rate. As Figure 3 depicts, the graduation success rates for Division I, male collegiate

basketball players increased between 1995 and 2005; however, they lagged behind the aggregate male student athlete population.

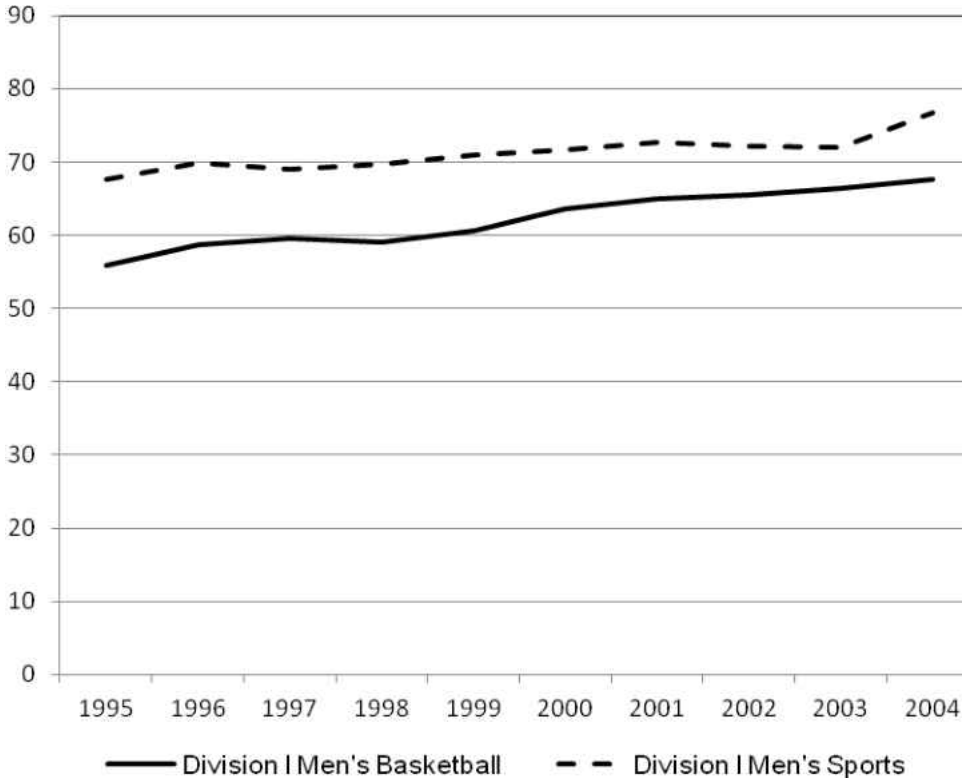


Figure 3. Trends in Graduation Success Rates for Division I Athletes

Division II calculates graduation success (Academic Success Rate) similar to Division I, but includes non-scholarship athletes (NCAA, 2011f). Like Division I, Division II men's basketball ranks low in Academic Success Rate (ASR) for any men's sport (NCAA, 2011g). Men's basketball has an ASR percentage of 59%, ranking just slightly higher than football (54%) and wrestling (57%). Men's rifle

ranks highest with 100% (NCAA, 2011g). 4 shows the trend of ASR scores for men's basketball in Division II for the years between 1999 and 2004.

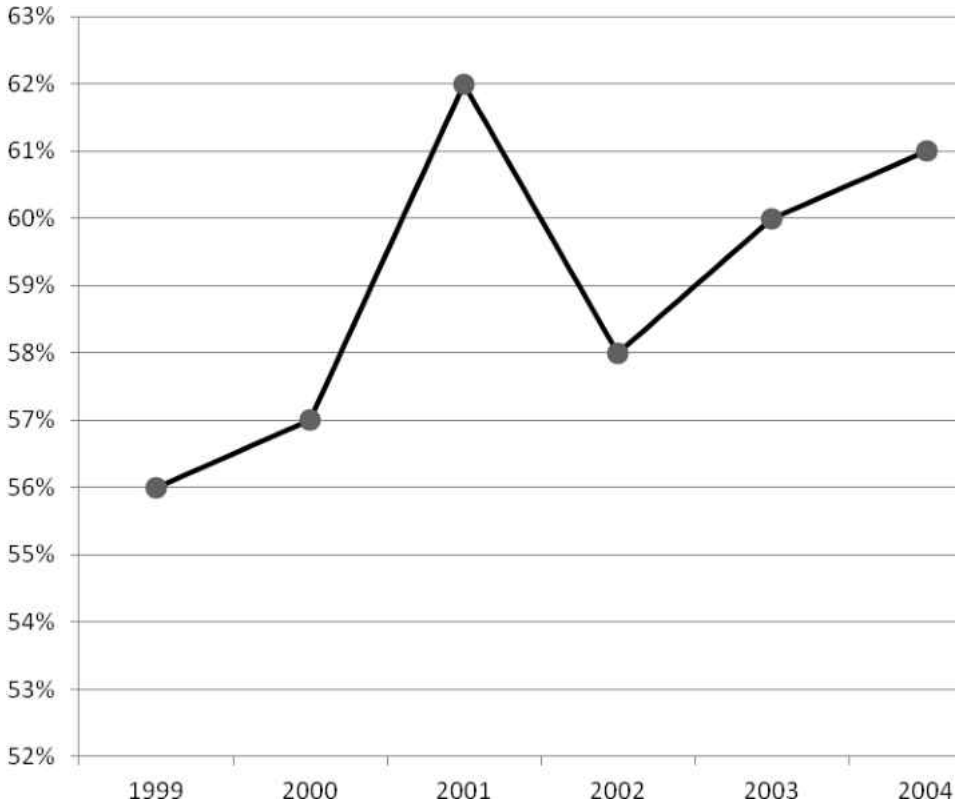


Figure 4. Academic Success Rate Trends in Division II Men's Basketball

In addition to graduation rates, the academic progress rate (APR) is also lagging for basketball players. For the years of 2006-2009, the average aggregate APR rate for Division I student athletes was 970. APR scores are reported of a 1,000 point scale. A score of 1,000 equates to 100% of the team remaining at the university and are eligible to compete. Men's basketball, however, had a four-year average of 945, which was the lowest average score of

any men's team. This score was based on the average scores of 344 Division I teams (NCAA, 2011e). Figure 5 tracks the APR for men's basketball over the course of six years and shows an increase over that time period. It is important to note that between the academic years of 2006-2007 and 2007-2008, the formula for calculating APR scores was changed and accounted, in part, for the increase in scores during that time period (NCAA, 2011e).

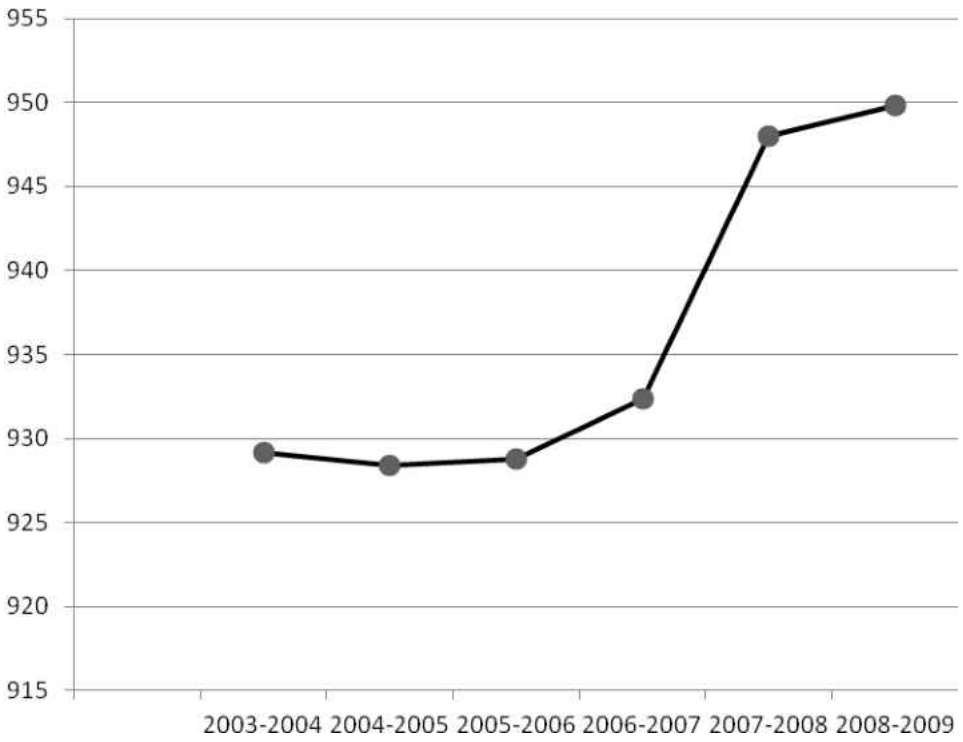


Figure 5. Trends in Division I Men's Basketball APR Scores

In addition to having lower graduation rates and APR scores than any other Division I sport, men's basketball also had the highest number of 0-for-2

athletes. A 0-for-2 student athlete is someone “who is neither academically eligible nor remains with the institution” (NCAA, 2011f, p. 1). In other words, these are student athletes who leave the institution and are academically ineligible to return. Men’s basketball’s 0-for-2 percentages peaked in 2003-2004 at 7.8%. In contrast, football’s 0-for-2 percentages reached a high of 7.0% in 2003-2004, and men’s baseball’s highest percentage of 0-for-2s was 5.6% (NCAA, 2011e). Figure 6 shows the percentage trend of 0-for-2s in Division I college basketball.

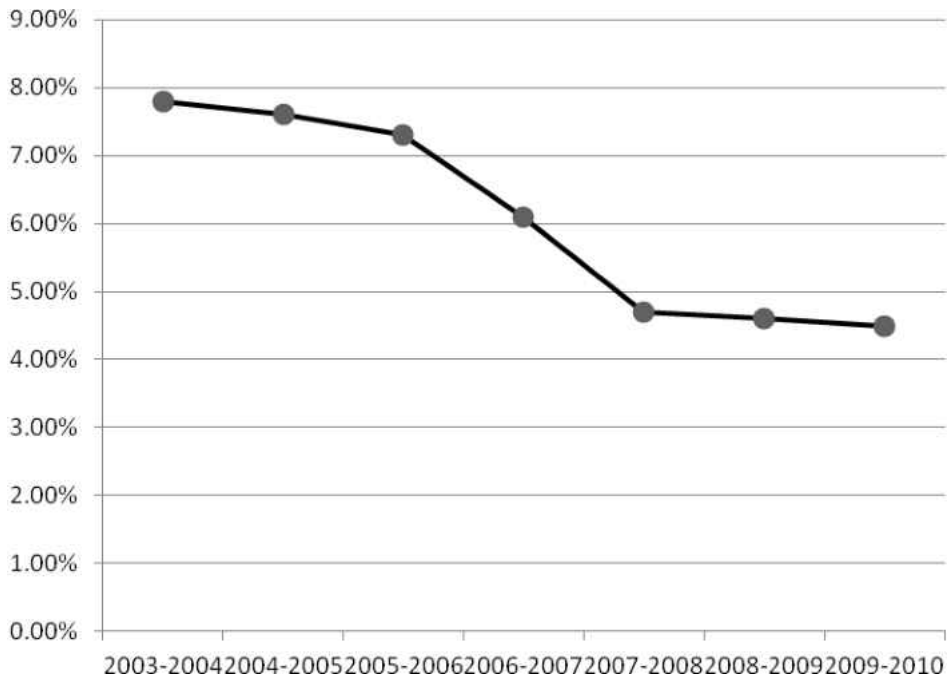


Figure 6. Trends in 0-for-2 Percentages in Division I Men's Basketball

As mentioned previously, lack of academic progress can result in various penalties for the institution and team (NCAA, 2010). When comparing the total number of penalties from 2005-2010, men's basketball had the highest number at 30. Football ranked second with 23 penalties and baseball ranked third with 6. The entirety of women's Division I sports accrued only 23 penalties (NCAA, 2011e).

Though a team's APR is negatively impacted by a student-athlete's departure, teams can recoup points for athletes who return to the institution. A delayed graduation point is awarded to an institution when a former scholarship player returns to the university after his/her eligibility has expired and completes a degree. One point is awarded for each former student athlete who completes a degree (NCAA, 2011e). Table 7 shows the comparison of delayed graduation points for men's major sports.

Table 7

Delayed Graduation Points for Men's Sports

Sport	Delayed Graduation Points
Men's Football	2,187
Men's Baseball	1,110
Men's Basketball	601

College Basketball Players and Engagement

Although data has shown basketball players in both Division I and Division II to have the lowest graduation rate of any sport group, only preliminary research has been conducted on the engagement of college basketball players. The preliminary research was a qualitative study conducted by Adler and Adler (1991) who devoted years to the observation of basketball players. The researchers found that these athletes became increasing disengaged from their academics the longer they were at the university. They attributed this disengagement to several factors including low academic involvement, the commercialized nature of college basketball, recognition of athletic success, and the priorities of the coach.

Adler and Adler's (1991) research provided one of the most in-depth investigations of behavior and disengagement of college basketball players that has been completed. The study was conducted at a private university that had high academic standards and an enrollment of approximately 6,000 students. Most of the players interviewed were African American (70%) and came from the lower or middle class. Upon entering the university, most student athletes reported feeling idealistic about their likelihood of graduating from the university. Through the messages received from family and friends, they believed that attending and graduating college would make them more successful. Adler and Adler (1991) revealed the naivety of the players, who believed that merely being at the university for four years would ensure a diploma. The freshman student

athletes were “optimistic” (p. 243) about their academic abilities and regularly attended class. During their first semester, that sense of idealism and optimism they had coming into the university was strengthened (Adler & Adler, 1991).

The longer the student athletes were enrolled at the university, the more they began to feel the overwhelming sense of commercialism in college sports, making their sport more of a job than a hobby. That commercialism, accompanied by media attention and fame, drew their attention away from the academic side of their university experience and toward the athletic side. By the conclusion of their first year, the basketball players acknowledged that their athletic participation was interfering with their academic experience (Adler & Adler, 1991).

The basketball players reported that they were largely disconnected from any academic decision-making. Coaches and academic support staff registered them for class, adjusted their schedules, and contacted professors. This led to what Adler and Adler (1991) describe as a false sense of security, meaning that the athletic department was looking out for their academic interests and they would experience few consequences for academic mistakes. The basketball players did, however, realize that there were consequences for their actions when they failed the course. What they did not realize, according to Adler and Adler (1991) was that they would have to put in just as much effort into their academics as non-athletes.

On the court or field they likely received a great deal of positive reinforcement for their actions, something that they did not get in the classroom. Often times, they saw their professors as critical, aloof, or uninterested. They reported feeling as though they were not treated the same as non-athletes. The basketball players incorrectly believed that because of their special status, professors would be more generous or lenient with them. Thus, they became less interested in their classes. In addition, they found themselves less prepared for the college workload than their non-athlete counterparts, due to poor study habits, pre-college preparation, and tighter schedules (Adler & Adler, 1991).

In addition to a lack of academic involvement, commercialism, and athletic recognition, the role of the coach played an important role in athletes' engagement. Though the coach had stressed the importance of academics over the summer, once training began, he ceased to mention anything of an academic nature. During the season, the coach's emphasis was on basketball and winning. The players internalized this to mean that basketball was more important than their academics (Adler & Adler, 1991).

Schroeder (2000) found in his single institution study on college basketball players that the relationship with faculty members evolved over the course of a student-athlete's academic career. Freshmen athletes were hesitant or intimidated regarding interaction with faculty. However, by the time students became upperclassmen, they valued the relationships and actively sought out professors (Schroeder, 2000). Schroeder (2000) observed the most frequent

form of student-faculty interaction occurred when student athletes visited office hours. In addition, student athletes believed that faculty members cared about them (Schroeder, 2000).

Alder and Adler's, (1991) as well as, Schroeder's (2000) studies paint conflicting picture of the experiences of college basketball players. Adler and Adler's (1991) found the players to be largely disengaged from faculty, even from the beginning of their career. Schroeder (2000), on the other hand, found the players to become increasing engaged with faculty the longer they were at the institution. Both of the studies were single institution studies, conducted in different athletic divisions, with Adler and Adler's at a Division I institution and Schroeder's (2000) at a Division III institution. These contradictory finds support Umbach et al. (2006), who found Division III athletes to have higher engagement scores when analyzing interaction with faculty.

Summary

The literature review provided a background on student engagement theory and the engagement variables relevant to this study. Also discussed was the NSSE survey instrument to be used in the study including the perspectives of advocates and critics of the instrument. Literature regarding student athletes and the engagement of student athletes through the lens of Chickering and Gamson's (1983) seven principles for good education. Finally, literature pertinent to college basketball players was presented, revealing vast gaps in research. Chapter 3

will present the methodology and procedures to be used in the study. The NSSE instrument will be further discussed along with its reliability and validity.

CHAPTER 3
METHODOLOGY

Introduction

The purpose of this study was to determine the impact of athletic division (Division I, Division II, and Division III), race (Non-White and White), and highest level of parental education (neither parent attended college, at least one parent attended college, at least one parent completed a baccalaureate degree, both parents completed a baccalaureate degree, at least one parent completed a graduate degree, and both parents completed a graduate degree) on four subscales of engagement (active learning, collaboration, interaction with faculty, time on task). This chapter provides a description of the population proposed for the study, background on the National Study of Student Engagement (NSSE) survey, study variables, research approach and design, and the procedure for data collection and data analysis.

Population

The NSSE survey is administered at over 700 institutions in both the United States and Canada each spring (NSSE, 2012). The population for the study was comprised of all of the students who completed the NSSE in the spring of 2008. Table 8 shows the number and percentages of institutions by athletic division that participated in the 2008 NSSE survey.

Table 8

Schools Participating in NSSE by Athletic Division: 2008

Divisions	Institutions N	%
Division I	153	21.4
Division II	143	20.0
Division III	220	30.8
Non-participating Schools	199	27.8
Total	715	100.0

Sample

The data for this study was collected from an archival data set, reflecting a purposeful sample. Purposeful sampling, a subset of non-probability sampling, specifically includes participants based on pre-identified criteria (Jupp, 2006). The research sample for this study was created by the University of Indiana Center for Postsecondary Research and consisted of survey respondents who fit the study criteria. All personal and institutional identifying characteristics of the participants have been removed by the Center for Postsecondary Research.

A total of 1072 participants who completed the NSSE survey in the spring of 2008 comprised the research population. Participants identified themselves as being representative of the following demographic criteria (male, student athletes, and basketball players). Two hundred and thirty four cases were thrown out of the research sample for not attending a school the researcher identified as

being affiliated with the NCAA. The final research sample totaled 838. The final sample breakdown consisted of 182 basketball players from Division I (21.7%), 172 from Division II (21.4%), and 477 from Division III (56.9%).

Instrumentation

The purpose of the NSSE survey is to "provide data to colleges and universities to assess and improve undergraduate education, inform accountability and accreditation efforts, and facilitate national and sector benchmarking efforts, among others" (NSSE, 2011a, p. 8). In addition, the survey aims to quantify the amount of student engagement through measuring the extent to which students participate in a series of behaviors (NSSE, 2011a).

The NSSE survey is divided into five benchmarks that universities can use to assess their own longitudinal progress and compare their results to national benchmarks. The national benchmarks provide a means to assess the student experience within American higher education. NSSE data allow institutions to identify their gaps and weaknesses in order to make meaningful improvements. The NSSE survey not only provides measures of accountability for institutions but also provides a means for students and parents to research and compare institutions (NSSE, 2006).

The survey itself is comprised of 28 questions including demographic questions and those about the college experience. The complete survey is contained in Appendix B. The survey is available in both print and electronic

formats, and takes approximately 15 minutes to complete (NSSE, 2011a). Survey questions address either demographic information or one of NSSE's five benchmarks: (a) academic challenge, (b) active and collaborative learning, (c) engaging in enriching educational experiences, (d) interaction with faculty, and (e) supportive campus environment. In the current investigation, four engagement subscales (active learning, collaborative learning, interaction with faculty, and time on task) will be used.

Instrument Reliability and Validity

Data are considered to be reliable when similar results can be reproduced with similar populations. It is also important for a multi-year survey to have equivalence or reliability between different versions of the instrument. The NSSE survey was found to have good internal consistency and temporal stability. Reliability tests showed that three of the five NSSE benchmarks (academic challenge, interaction with faculty, and supportive campus environment) are internally consistent across different subgroups. Each of the five benchmarks showed temporal stability across time (Gonyea & Miller, 2010). Table 9 presents the temporal stability estimates of the NSSE five benchmarks (NSSE, 2011b). Modest reliability is defined by a Cronbach's alpha between .65 and .80, a target reached by all of the reliability estimates of the NSSE survey.

Validity is the extent to which the concepts, constructs, skills, or ideas that are meant to be measured are actually measured. The NSSE survey was shown

to have good content, construct, predictive, and consequential validity (Gonyea & Miller, 2010).

Table 9

Temporal Stability

NSSE Benchmarks	Freshmen	Seniors
Academic challenge	.79	.79
Active and collaborative learning	.81	.80
Enriching educational experiences	.75	.89
Interaction with faculty	.82	.92
Supportive campus environment	.75	.80

While the overall NSSE instrument has been shown to be reliable, it was necessary to test the reliability of the composite variables created for this study. Each composite variable had a reliability score near the recommended .70. The active learning variable, made up of the three sub-variables, had an alpha value of .61. The cooperation among students variable, comprised of four sub-variables, had an alpha score of .67. In addition, the interaction with faculty variable had an alpha value equal to .81. Last, the time on task variable had an alpha value of .66.

Study Variables

Independent Variable

Two sets of independent variables, athletic division and demographic information, were investigated in the proposed study of the relationship between NCAA athletic division and engagement. The variable of athletic division has three levels (Division I, Division II, and Division III) and is considered a selected, non-manipulated, categorical, independent variable. Athletic division is defined by the NCAA's categorization of athletic division.

Demographic data consisted of two parts: racial or ethnic identification and parental education level. Racial or ethnic identification has two levels including White and Non-White. The second demographic variable, parental education contained of six levels that relate to the education level of the mother and father. The levels include neither parent attempted college, at least one parent attempted college, at least one parent completed a baccalaureate degree, both parents completed a baccalaureate degree, at least one parent completed a graduate degree, and both parents completed a graduate degree. Like athletic division, the demographic variables are considered selected, non-manipulated, categorical, independent variables.

The independent variables were chosen based on a thorough review of literature. Athletic division was investigated to test a premise put forth by researchers that lower division athletes are more engaged than upper division

athletes (Pascarella et al., 1999; Umbach et al., 2006). In addition, demographic information was added to the study to test the findings of Gaston-Gayles and Hu (2009), Kuh, Hu & Vesper (2000) and Pascarella and Terenzini (2005). This study will either validate or contradict those findings.

Dependent Variables

The dependent variable, engagement, is operationally defined as the total scores on each of four subscales of engagement: active learning, collaborative learning, interaction with faculty, and time on task. Although five subscales are available, only four were evaluated in the current investigation. These four subscales/variables were selected because of their congruence with Chickering and Gamson's (1989) seven principles for good undergraduate education. This theory postulates that both students and faculty are active participants in undergraduate education. These four benchmarks are correlated to the practices in which students can control their participation.

Each subscale is made up of numerous behaviors that are assessed by survey questions, and each behavior is measured on a 4-point Likert-type scale. The four subscales of engagement are discussed in the following paragraphs and detailed in Tables 10, 11, 12, and 13 which contain the items, the behaviors, and the NSSE code for each of the subscales.

Active learning

Active learning, what the student does inside the classroom, consists of such activities as in-class participation, in-class presentations, and participating in community projects. The three items, behaviors, and respective codes defined as active learning are displayed in Table 10.

Collaborative Learning

Collaborative learning is defined as working with other students inside and outside of the classroom. Table 11 illustrates the four items, behaviors, and respective codes classified as collaborative learning.

Table 10

NSSE Items, Benchmark Behaviors, and Codes: Active Learning

Item	NSSE Benchmark Behavior (code)
1a	Asked questions or contributed to class discussions (clquest)
1b	Made a class presentation (clpresen)
1k	Participated in a community-based project as part of a regular course (commonproj)

Table 11

NSSE Items, Benchmark Behaviors, and Codes: Collaborative Learning

Item	NSSE Benchmark Behavior (code)
1g	Worked with other students on projects during class (classgrp)
1h	Worked with classmates outside of class to prepare assignments (occgrp)
1j	Tutored or taught other students (tutor)
1t	Discussed ideas from your readings or classes with others outside of class (oocideas)

Academic challenge (time on task)

Academic challenge is defined as both the expectations held by the institution as well as time spent preparing for class or time spent reading and writing. The latter concept correlates to Chickering & Gamson's (1987) principle of time on task. The six items, behaviors, and respective codes defined as academic challenge (time on task) are contained in Table 12.

Table 12

NSSE Items, Benchmark Behaviors, and Codes: Time on Task

Item	NSSE Benchmark Behavior (code)
3a	Number of assigned textbooks, books, or book-length packs (readasgn)
3c	Number of written papers or reports of 20 pages or more (writemor)
3d	Number of written papers or reports between 5 and 19 pages (writemid)
3e	Number of written papers or reports fewer than 5 pages (writesml)
4a	Number of problem sets that took more than an hour to complete
4b	Number of problem sets that took less than an hour to complete
9a	How many hours per week prepping for class

Interaction with Faculty

Interaction with faculty is defined by the extent of interaction a student has with faculty, both inside and outside of the classroom. The six items, behaviors, and respective codes defined as faculty interaction behaviors are displayed in Table 13.

Table 13

NSSE Items, Benchmark Behaviors, and Codes: Interaction With Faculty

Item	NSSE Benchmark Behavior (code)
1m	Used email to communicate with an instructor (email)
1n	Discussed grades or assignments with an instructor (facgrade)
1o	Discussed ideas from your readings or classes with faculty members outside of class (facideas)
1p	Talked about career plans with a faculty member or advisor (facplan)
1q	Received prompt written or oral feedback from faculty on your academic performance (facfeed)
1s	Worked with faculty members on activities other than coursework (facother)

Research Approach and Design

Research Approach

This study was directed by a quantitative research approach. The need for quantitative studies is largely guided by a review of the literature that reveals gaps that warrant investigation (Creswell, 2008). The limited research on student athletes and engagement played a role in identifying and developing the purpose of the study and the variables for investigation. Quantitative studies also allow for the comparison of groups using statistical analysis and aim to answer specific research questions with unbiased, quantifiable data (Creswell, 2008).

Furthermore, a quantitative study employs a fixed data collection instrument. In the proposed study, the NSSE survey, administered in its totality to each participant, served as a fixed data collection instrument.

Research Design

A causal comparative research design was used to determine the impact of the independent variables (athletic division and demographics) on the dependent variable (engagement). In causal comparative studies, independent variable level assignment is based on pre-existing characteristics that are not manipulated by the researcher and random assignment is not possible (Boudah, 2011). As random assignment is not used, cause and effect relationships cannot be determined. However, significant differences can be reported between levels of the independent variable on the dependent variable in this causal comparative investigation. Indeed, the independent variable in the current investigation, athletic division, is considered a selected independent variable and cannot be manipulated. As random assignment is not possible for these variables, a quasi-experimental design is considered the highest possible on the constraint continuum given the nature of the variables under investigation.

Data Collection and Analysis

Data Collection

Following approval from the University of Central Florida Institutional Review Board (Appendix C), the researcher gained access to the National Survey of Student Engagement (NSSE) dataset (Appendix D). The data were coded by the Center for Postsecondary Research so that no identifying information was made available to the researcher. Once all of the cases addressing the population relevant to the current study were identified, they were verified to ensure completeness and then uploaded into the Statistical Package for the Social Sciences (SPSS) for analysis.

Data Analysis

Separate analyses of variance (ANOVA) were performed on each of the four subscale scores representing the dependent variables of engagement, represented by the areas of active learning, collaborative learning, time on task, and interaction with faculty. A one-way ANOVA was appropriate for use in this situation, as the goal is to determine the existence of differences in the continuous dependent variable, engagement, between various levels of the categorical independent variables, athletic division and parental education (Stevens, 2007). In addition, independent t-tests were conducted on dependent variables of engagement by racial or ethnic identification. The ANOVA and

independent t-test allowed for the determination of significant main effects of the independent variable of athletic division on each of the dependent variables. Significance was tested at the $\alpha = .05$ level. Effect size, as measured by η^2, was also be determined to provide an indication of any practical significance. Descriptive statistics consisting of means and standard deviations are also be reported for each of the four engagement subscales, overall, by division, and by demographic identifiers.

Authorization to Conduct Research

After defense of the proposal, a human research protocol was submitted to the University of Central Florida's Institutional Review Board (IRB). The letter of approval from IRB is contained in Appendix C.

Originality

Every dissertation and thesis must be submitted through turnitin.com, as mandated by the graduate college. The standard of the Higher Education and Policy program states that students must have an originality score between zero and ten percent. The initial submission resulted in a score of 18%, 3% of which was generated from pieces of work that had been previously submitted by the researcher. An additional 5% of the originality score was determined to be quotations. Approximately 1% of the originality was determined to be citations.

An extra 8% was determined to be common words or phrases or matches consisting of less than 1% originality. The final originality score rated at 1%.

Summary

The purpose of this study was to examine and describe the impact of athletic division, race, and parental education on student athlete engagement in a male collegiate basketball population. Archival data from the National Survey of Student Engagement (NSSE) was utilized, and data from approximately 838 male basketball players were analyzed. A quantitative approach and causal comparative research design was employed to determine whether there were significant main effects of the independent variables of athletic division and demographics on various subscales representing engagement.

The research questions posed explores whether there are significant differences between Division I, Division II, and Division III athletes on the four engagement subscales of active learning, collaborative learning, interaction with faculty, and time on task and whether differences in scores existed when racial identification and parental education were considered. Data analysis consisted of descriptive and inferential statistical procedures. A one-way ANOVA was conducted on each of the four engagement subscales in order to evaluate data so as to answer the research questions dealing with athletic division and parental education level. Independent t-tests were performed to evaluate the differences in engagement based on racial or ethnic identification. The results of the

analyses are presented in Chapter 4 of the dissertation. Chapter 5 contains a summary and discussion of the results.

CHAPTER 4
RESULTS

Introduction

The results of this study, stemming from the statistical analysis performed to answer the two research questions, are presented in this chapter. The data were analyzed using SPSS 18.0 for Macintosh. The inferential statistics were analyzed using a significance level of .05.

Population

A sample of 838 respondents was analyzed. Division III had the highest number of respondents with 477 (56.9%) responses coming from this division. Division II had the lowest number of responses with 179 respondents (21.4%) being identified as Division II basketball players. Division I represented 21.7%, or 182 of the total responses. The percentage of responses by athletic division are reflective of the comparable sizes of the NCAA athletic divisions with Division III being the largest athletic division representing 40% of all NCAA student athletes. Table 14 shows the response rate of the sample by athletic division.

Table 14

Comparison of Response Rate by Division to NSSE Participation by Division

Divisions	NSSE Participation by Division N	%	Sample by Division *n*	%
Division I	153	21.4	182	17.0
Division II	143	20.0	179	16.7
Division III	220	30.8	477	44.5
Non-participating Schools	199	27.8	234	21.8
Total	715	100.0	838	100.00

The majority of student athletes had a father who completed a bachelor's degree (27.9%) or higher than a bachelor's degree (24.1%) as shown in Table 15. Additionally, the majority of respondents had a mother who had completed a bachelor's degree (28.2%) or a degree higher than a bachelor's degree (21.4%). These numbers were somewhat lower than those of Shulman and Bowen (2001) who observed that 40% of high profile athletes at Division IA public universities had a father who had a bachelor's degree or higher. Schulman and Bowen (2006), however, also found that 53% of athletes at Division 1A private schools and 59% at co-ed liberal arts schools had a father who had completed a bachelor's degree or higher.

Table 15

Demographic Characteristics: Highest Level of Parental Education

	Education			
	Paternal		Maternal	
Level of Education	*n*	%	*n*	%
Did not finish high school	43	5.1	33	3.9
Graduated from high school	179	21.4	155	18.5
Attended college but did not complete degree	96	11.5	113	13.5
Completed an associate's degree	58	6.9	101	12.1
Completed a bachelor's degree	234	27.9	236	28.2
Completed a master's degree	125	14.9	143	17.1
Completed a doctoral degree	77	9.2	36	4.3
Missing data	26	3.1	21	2.5
Total	838	100.0	838	100.0

Note. Totals may not equal 100% due to rounding.

Table 16 contains the demographic characteristics for all respondents by race. The table compares the racial demographics of Division I and Division II basketball to the research sample. The majority (62.3%) of respondents were white. This percentage was slightly lower than the overall percentage of white, male NCAA athletes at 72.2% (Lapchick, 2009). Basketball, however, had a higher percentage of African American student athletes than other sports with 62% in Division I and approximately 52% in Division II.

Table 16

Comparison of Racial Breakdown of NCAA Divisions I & II to Sample

	Division I				Division II				Division I & II Total			
	NCAA		Sample		NCAA		Sample		NCAA		Sample	
Race	n	%	n	%	n	%	n	%	n	%	n	%
African American	2,523	61.9	44	24.2	2,124	52.2	44	24.6	4,647	57.1	88	24.6
American Indian	9	.2	10	5.5	20	.5	2	1.1	29	.4	12	33.5
Asian, Pacific Islander	11	.2	9	4.9	13	.6	8	4.5	22	.3	17	4.7
Hispanic (Mexican, Puerto Rican, Latino, or Other Hispanic)	75	.8	8	4	122	3.0	8	4.5	197	2.4	16	4.5
Other	324	8.0	9	4.9	167	4.1	0	0.0	491	6.0	9	2.5
Two or More	74	1.8	6	3.3	68	1.7	6	3.4	142	1.7	12	3.4
Unknown	204	5.0	13	7.1	226	5.6	9	5.0	430	5.3	22	6.1
White	853	20.9	82	45.1	1,316	32.4	100	55.9	2,169	26.6	182	5.1
Total	4073	100.0	181	100.0	4056	100	177	100.0	8217	100.0	358	100.0

Note. Totals may not equal 100% due to rounding.

Research Question1

Is there a difference in levels of engagement between Division I, Division II and, Division III male collegiate basketball players as assessed by four measures of engagement: (a) active learning; (b) cooperation; (c) interaction with faculty; and (d) time on task?

Descriptive statistics for each of the four composite variables were used to identify initial differences within the data. Table 17 shows the descriptive statistics for the data set prior to analysis by athletic division. The composite variables were created by totaling the results within each variable category and dividing by the total number of items within the variable category, allowing for comparisons to the original four-point Likert-type scale of 1 (never) to 4 (very often).

Table 17

Descriptive Statistics Overall: All Composite Variables

			95% CI	
Variables	*M*	*SD*	*LL*	*UL*
Active Learning (*n* = 803)	2.49	0.64	2.45	2.54
Cooperation Among Students (*n* = 795)	2.47	0.60	2.43	2.51
Time on Task (*n* = 810)	2.75	0.62	2.70	2.79
Interaction with Faculty (*n* = 816)	2.62	0.62	2.57	2.66

Note. CI = confidence interval, M = mean, SD = standard deviation, LL = lower limit, UL = upper limit.

One-way ANOVA

Prior to analyzing the data by athletic division, tests of normality and homogeneity were conducted in order to ensure the accurate calculation and interpretation of an ANOVA test. Normality was defined as having skewness and kurtosis values within the range of -2.0 and 2.0. Levene's test of homogeneity assessed equality of variances. Homogeneity of variances can be assumed with a $p > .05$.

Active learning

An ANOVA test requires the fulfillment of two assumptions, normality and homogeneity of variances, each of which was met within the active learning variable. Table 18 shows the normality of the composite variable. In addition, a

Levene's test for homogeneity of variables was performed, and the assumption of equal variances was met ($F(2,800) = 0.43$, $p = .65$).

Table 18

Test of Normality for Active Learning: Division

Division	Skewness	Kurtosis
Division I	.22	-.40
Division II	.35	.24
Division III	.54	-.14

As shown in Table 19, no statistically significant difference ($F(2,800) = 3.02$, $p = .05$) in engagement existed between basketball players based on athletic division membership. Less than 1% of the variability in active learning could be explained by the independent variable of athletic division ($\eta^2 = .007$). By and large, active learning decreased as athletic division moved from Division I ($M = 2.59$, $SD = 0.65$) to Division II ($M = 2.50$, $SD = 0.64$) to Division III ($M = 2.45$, $SD = 0.63$). It is important to note that these differences were not statistically significant. In general, the mean of each athletic division indicated student athletes *sometimes* or *often* engaged in active learning.

Table 19

Descriptive Statistics for Active Learning: Division (N = 803)

			95% CI	
Division	*M*	*SD*	*LL*	*UL*
Division I (*n* = 172)	2.59	0.65	2.49	2.69
Division II (*n* = 173)	2.50	0.64	2.41	2.60
Division III (*n* = 458)	2.45	0.63	2.39	2.51

Note. $F(2, 800) = 3.02$, $p = .05$, $\eta^2 = .007$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Cooperation Among Students

The assumptions for normality were met for the variable of cooperation among students, as shown in Table 20. Homogeneity of variances was assumed ($F(2, 792) = 1.95$, $p = .14$).

Table 20

Test of Normality for Cooperation Among Students

Division	Skewness	Kurtosis
Division I	.41	-.08
Division II	.17	-.13
Division III	.43	.14

No statistically significant difference ($F(2, 792) = 2.46$, $p = .09$) in cooperation among students existed between basketball players in different

athletic divisions. Less than 1% of the variability in cooperation among students could be explained by the independent variable of athletic division (η^2 = .006). In general, cooperation decreased as student athletes moved down athletic division from Division I (*M* = 2.54, *SD* = 0.64) to Division II (*M* = 2.51, *SD* = 0.64) to Division III (*M* = 2.43, *SD* = 0.57). These results are shown in Table 21. Again, the differences were not statistically significant. The mean for each athletic division indicated student athletes *sometimes* or *often* engaged in activities that were defined as cooperation among students.

Table 21

Descriptive Statistics for Cooperation Among Students: Athletic Division (N = 795)

			95% CI	
Division	*M*	*SD*	*LL*	*UL*
Division I (*n* = 167)	2.54	0.64	2.44	2.64
Division II (*n* = 171)	2.51	0.64	2.41	2.60
Division III (*n* = 457)	2.43	0.57	2.38	2.48

Note. $F(2, 792) = 2.46$, $p = .09$, $\eta^2 = .006$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Interaction with Faculty

Tests of normality were met within the variable of interaction with faculty. Table 22 shows the skewness and kurtosis for each of the three athletic divisions.

Table 22

Test of Normality for Interaction with Faculty: Athletic Division

Division	Skewness	Kurtosis
Division I	.06	-.44
Division II	.09	.19
Division III	.35	.06

The assumption of equal variances was not met using Levene's Test ($F(2, 813) = 4.84$, $p = .01$). Because homogeneity could not be assumed, an alternative form of the ANOVA test, a Welch's *F*, was performed. The Welch's *F* test allows for heterogeneous groups to be compared.

No statistically significant difference ($F(2, 813) = 2.11$, $p = .12$) existed in interaction with faculty based on athletic division when an ANOVA was used. These findings were consistent with those of the Welch's *F* test which also found no statistical significance ($F(2, 333) = 1.87$, $p = .16$). Less than 1% of the variability in interaction with faculty could be explained by the independent variable of athletic division ($\eta^2 = .005$). Like the prior variables, a decrease in the mean score was found as athletic divisions moved from Division I ($M = 2.70$, $SD = 0.68$) to Division II ($M = 2.61$, $SD = 0.65$) to Division III ($M = 2.59$, $SD = 0.58$). Table 23 shows these results. The mean of each athletic division indicated student athletes *sometimes* or *often* had interaction with faculty.

Table 23

Descriptive Statistics for Interaction With Faculty: Athletic Division (N = 816)

Division	*M*	*SD*	95% CI	
			LL	*UL*
Division I (*n* = 175)	2.70	0.68	2.60	2.80
Division II (*n* = 174)	2.61	0.65	2.52	2.71
Division III (*n* = 467)	2.59	0.58	2.53	2.64

Note. $F(2, 813) = 2.11$, $p = .12$, $\eta^2 = .005$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Time on Task

Each athletic division within the time on task variable met the assumption of normality except for Division III. The kurtosis revealed a 2.33 score. Although the score was above the recommended 2.0, the large sample size and lack of outliers allowed for the use of the ANOVA test. Thus, the assumption of normality was accepted. The other athletic divisions and variables met the assumption of normality. Table 24 shows the tests for normality. In addition, the assumption of homogeneity was not met ($F(2, 807) = 4.09$, $p = .02$). Thus, in addition to the ANOVA test, a Welch's *F* test was used to account for the heterogeneity of variance.

Table 24

Test of Normality for Time on Task: Athletic Division

Division	Skewness	Kurtosis
Division I	.61	1.02
Division II	.50	1.85
Division III	.91	2.33

No statistically significant difference ($F(2, 807) = 1.58$, $p = .21$) existed in time on task based on the athletic division of the basketball player. The Welch's *F* test corroborated the ANOVA test by showing no statistical significance between athletic divisions ($F(2, 32) = 1.48$, $p = .23$). Less than 1% of the variability in interaction with faculty could be explained by the independent variable of athletic division ($\eta^2 = .004$). The time on task score increased as a student athlete moved down in division, from Division I ($M = 2.69$, $SD = 0.69$) to Division II ($M = 2.71$, $SD = 0.66$) to Division III ($M = 2.78$, $SD = 0.58$). These results are shown in Table 25.

Table 25

Descriptive Statistics for Time on Task: Athletic Division (N = 810)

Division	*M*	*SD*	95% CI	
			LL	*UL*
Division I (*n* = 174)	2.69	0.69	2.59	2.79
Division II (*n* = 170)	2.71	0.66	2.61	2.81
Division III (*n* = 466)	2.78	0.58	2.73	2.83

Note. $F(2, 807) = 1.58$, $p = .21$, $\eta^2 = .004$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Research Question 2

What differences exist in the levels of engagement among basketball players when both student race and highest parental level of education are considered?

The second research question analyzed different independent variables to assess engagement among student athletes, including race and level of parental education.

Independent T-Test

An independent t-test was performed in order to compare the levels of engagement of White and Non-White respondents. Prior to conducting the analysis, tests of normality were performed. Each variable met the assumption of normality by having a skewness and kurtosis value between -2 and 2.

Race

Due to the small number of respondents in racial categories other than White, the race variable was reduced from nine categories (American Indian or other Native American, Asian or Asian American or Pacific Islander, Black or African American, White or Non-Hispanic, Puerto Rican, Other Hispanic or Latino, Multiracial, Other, I prefer not to respond) to two (White, Non-White). The racial group, White, accounted for 62.3% (n = 522) of the study sample, and Non-White accounted for 32.0% (n = 268) of the sample. The 5.7% (n = 48) of respondents who preferred not to list their race were not included in the data analysis.

Active Learning

There was a statistically significant mean difference ($t(434) = 2.14$, $p = .03$) in active learning between White and Non-White basketball players. Non-White players showed a significantly higher level of active learning ($M = 2.57$, $SD = 0.71$) than White basketball players ($M = 2.46$, $SD = 0.59$). In general, each ethnic group's mean fell in the range of *sometimes* to *often*. Table 26 contains the descriptive statistics for active learning composite analysis: ethnicity.

Table 26

Descriptive Statistics for Active Learning: Race (N = 760)

			95% CI	
Race	*M*	*SD*	*LL*	*UL*
Non-White (*n* = 253)	2.57	0.71	2.48	2.66
White (*n* = 507)	2.46	0.59	2.41	2.51

Note. $t(434) = 2.14$, $p = .03$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Cooperation Among Students

There was no statistically significant difference ($t(420) = 1.67$, $p = .10$) in cooperation among students between White and Non-White basketball players. Although not significant, Non-White student athletes showed a higher level of cooperation among students ($M = 2.53$, $SD = 0.67$) than did White student athletes ($M = 2.45$, $SD = 0.55$). On average, each ethnic group's means fell in the range of *sometimes* to *often*. These results are displayed in Table 27.

Table 27

Descriptive Statistics for Cooperation Among Students: Race (N = 753)

			95% CI	
Race	*M*	*SD*	*LL*	*UL*
Non-White (*n* = 249)	2.53	0.67	2.45	2.61
White (*n* = 504)	2.45	0.55	2.40	2.50

Note. $t(420) = 1.67$, $p = .10$, CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Interaction with Faculty

There was no statistically significant difference ($t(415) = 1.70$, $p = .09$) in interaction with faculty between White and Non-White basketball players. Higher levels of interaction with faculty were shown by Non-White players ($M = 2.68$, $SD = 0.72$) than White basketball players ($M = 2.59$, $SD = 0.55$). These differences, however, were not significant. On average, each ethnic group's means fell in the range of *sometimes* to *often*. Table 28 shows these results.

Table 28

Descriptive Statistics for Interaction With Faculty: Race (N = 772)

			95% CI	
Race	*M*	*SD*	*LL*	*UL*
Non-White (*n* = 259)	2.68	0.72	2.59	2.76
White (*n* = 513)	2.59	0.55	2.54	2.64

Note. $t(415) = 1.70$, $p = .09$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Time on Task

There was no statistically significant difference ($t(387) = 0.58$, $p = .56$) in time on task between White and Non-White basketball players. In general, Non-White basketball players showed a higher level of time on task activities ($M = 2.76$, $SD = 0.75$) than did White players ($M = 2.73$, $SD = 0.54$); however, the difference was not significant. Descriptive statistics are provided in Table 29.

Table 29

Descriptive Statistics for Time on Task: Race (N = 764)

			95% CI	
Race	*M*	*SD*	*LL*	*UL*
Non-White (*n* = 254)	2.76	0.75	2.67	2.85
White (*n* = 510)	2.73	0.54	2.68	2.78

Note. $t(387) = 0.58$, $p = .56$, CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Table 30

Highest Level of Parental Education: Frequencies and Percentages

Education Level	Frequency	Percentage
Neither parent attended college.	111	13.2
At least one parent attended college.	173	20.6
At least one parent completed a baccalaureate degree.	149	17.8
Both parents completed a baccalaureate degree.	98	11.7
At least one parent completed a graduate degree.	191	22.8

One-Way ANOVA

One-way ANOVAs were performed to compare the mean levels of engagement on the four sub-variables by levels of parental education. Prior to analyzing the data, tests of normality and homogeneity were conducted.

Parental Education

In addition to race, respondents were asked to identify the highest level of education attained by their mother and/or father. These two variables were used to create a single parental education variable, which included the following categories: neither parent attended college, at least one parent attended college (also includes earning an AA degree), at least one parent completed a baccalaureate degree, both parents completed a baccalaureate degree, at least

one parent completed a graduate degree, and both parents completed a bachelor's degree. Most basketball players in this study had at least one parent who had completed a graduate degree (22.8%), and 20.6% of players in this study indicated that had at least one parent who had attended college (20.6%) This information is displayed in Table 30.

Active learning

Though the assumption of normality was met for the active learning variable, equal variances could not be assumed ($F(5, 777) = 4.13$, $p = .001$). Table 31 shows the results of the test of normality. In addition to the one-way ANOVA, a Welch's F test was run to validate the ANOVA results.

Table 31

Test of Normality For Active Learning: Highest Level of Parental Education

Education Level	Skewness	Kurtosis
Neither parent attended college.	.42	-.33
At least one parent attended college.	.33	-.14
At least one parent completed a baccalaureate degree.	.61	.03
Both parents completed a baccalaureate degree.	.49	.03
At least one parent completed a graduate degree.	.43	-.49
Both parents completed a graduate degree.	.31	-.49

There was no statistically significant difference ($F(5, 777) = 0.68$, $p = .64$) in active learning based on parental level of education. A Welch's F test validated these findings ($F(5, 324) = 0.60$, $p = .70$). Less than 1% of variability in active learning was explained by the highest level of parental education ($\eta^2 = .004$). No discernible pattern existed in mean active learning engagement between basketball players who came from parents with differing backgrounds of educational attainment. Basketball players with at least one parent completing a baccalaureate degree ($M = 2.44$, $SD = 0.68$) and players with both parents completing a graduate degree ($M = 2.44$, $SD = 0.80$) had the lowest levels of active learning. The highest mean levels of active learning were found in basketball players who had neither parent attempting college ($M = 2.56$, $SD = 0.66$). These differences, however, were not significant. These results are shown in Table 32.

Table 32

Descriptive Statistics for Active Learning: Highest Level of Parental Education (N = 783)

Education Level	*M*	*SD*	95% CI *LL*	95% CI *UL*
Neither parent attempted college. (*n* = 103)	2.56	0.66	2.43	2.69
At least one parent attempted college (*n* = 168)	2.49	0.58	2.40	2.50
At least one parent completed a bachelor degree. (*n* = 141)	2.44	0.68	2.33	2.56
Both parents completed a baccalaureate degree. (*n* = 95)	2.48	0.52	2.37	2.59
At least one parent completed a graduate degree. (*n* = 183)	2.54	0.61	2.45	2.62
Both parents completed a graduate degree. (*n* = 93)	2.44	0.80	2.27	2.60

Note. $F(5, 777) = 0.68$, $p = .64$, $\eta^2 = .004$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Cooperation Among Students

Although the assumption of normality was met for the cooperation among students variable, equal variances could not be assumed ($F(5, 770) = 4.91$, $p < .001$). Table 33 shows the results of the test of normality. In addition to the one-way ANOVA, a Welch's F test was run to validate the ANOVA results.

Table 33

Test of Normality For Cooperation Among Students: Highest Level of Parental Education

Education Level	Skewness	Kurtosis
Neither parent attended college.	.26	-.42
At least one parent attended college.	.36	-.56
At least one parent completed a baccalaureate degree.	.48	.34
Both parents completed a baccalaureate degree.	.46	-.19
At least one parent completed a graduate degree.	.54	.35
Both parents completed a graduate degree.	.25	-.25

There was no statistically significant mean difference ($F(5, 770) = 0.52$, $p = .76$) found in cooperation among students between basketball players with differing backgrounds of parental educational attainment. A Welch's F test was performed ($F(5, 320) = 0.44$, $p = .82$) corroborating the findings of the one-way ANOVA. Less than 1% of variability in cooperation among students could be explained by the highest level of parental education ($\eta^2 = .003$). With the exception of the group of students with at least one parent completing a graduate degree ($M = 2.48$, $SD = 0.54$), levels of cooperation among students decreased as highest level of parental education attained increased. The results are shown in Table 34.

Table 34

Descriptive Statistics for Cooperation Among Students: Highest Level of Parental Education (N = 776)

Education Level	*M*	*SD*	95% *CI*	
			LL	*UL*
Neither parent attempted college. (*n* = 105)	2.55	0.64	2.43	2.67
At least one parent attempted college. (*n* = 166)	2.47	0.59	2.38	2.56
At least one parent completed baccalaureate degree. (*n* = 140)	2.46	0.60	2.36	2.56
Both parents completed a baccalaureate degree. (*n* = 94)	2.45	0.49	2.35	2.56
At least one parent completed a graduate degree. (*n* = 181)	2.48	0.54	2.40	2.56
Both parents completed a graduate degree. (*n* = 90)	2.42	0.79	2.26	2.59

Note. $F(5, 770) = 0.52$, $p = .76$, $\eta^2 = .003$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Interaction with Faculty

Although the assumption of normality was met for the interaction with faculty variable, equal variances could not be assumed ($F(5, 790) = 5.47$, $p < .001$). Table 35 shows the results of the test of normality. In addition to the one-way ANOVA, a Welch's *F* test was run to validate the ANOVA results.

Table 35

Test of Normality For Interaction With Faculty: Highest Level of Parental Education

Education Level	Skewness	Kurtosis
Neither parent attended college.	.10	-.10
At least one parent attended college.	.38	-.20
At least one parent completed a baccalaureate degree.	.21	-.22
Both parents completed a baccalaureate degree.	.69	.74
At least one parent completed a graduate degree.	.24	-.03
Both parents completed a graduate degree.	.06	-.55

There was no statistically significant difference ($F(5,790) = 0.50$, $p = .78$) in interaction with faculty based on highest level of parental education. These findings were validated by performing a Welch's F test ($F(5, 329) = 0.48$, $p = .79$). Less than 1% of the variability in interaction with faculty could be explained by highest level of parental education ($\eta^2 = .003$). Levels of interaction with faculty decreased as highest level of parental education attained increased. This trend, however, did not include the group of basketball players that had at least one parent completing a graduate degree ($M = 2.64$, $SD = 0.55$). These results are shown in Table 36.

Table 36

Descriptive Statistics for Interaction With Faculty: Highest Level of Parental Education (N = 796)

Education Level	*M*	*SD*	95% CI *LL*	95% CI *UL*
Neither parent attempted college. (*n* = 106)	2.68	0.65	2.56	2.81
At least one parent attempted college. (*n* = 169)	2.62	0.60	2.53	2.71
At least one parent completed a baccalaureate degree. (*n* = 144)	2.61	0.64	2.51	2.72
Both parents completed a baccalaureate degree. (*n* = 98)	2.57	0.52	2.47	2.68
At least one parent completed a graduate degree. (*n* = 186)	2.64	0.55	2.56	2.72
Both parents completed a graduate degree. (*n* = 93)	2.56	0.80	2.40	2.73

Note. $F(5, 790) = 0.50$, $p = .78$, $\eta^2 = .003$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Time on Task

Although the assumption of normality was met for the time on task variable, equal variances could not be assumed ($F(5, 785) = 4.18$, $p = .001$). Table 37 shows the results of the test of normality. In addition to the one-way ANOVA, a Welch's *F* test was run to validate the ANOVA results.

Table 37

Test of Normality for Time on Task: Highest Level of Parental Education

Education Level	Skewness	Kurtosis
Neither parent attended college.	-.25	.18
At least one parent attended college.	.28	1.28
At least one parent completed a baccalaureate degree.	.85	1.92
Both parents completed a baccalaureate degree.	.71	.99
At least one parent completed a graduate degree.	.92	1.20
Both parents completed a graduate degree.	.54	1.42

There was no statistically significant difference ($F(5, 785) = 1.56$, $p = .17$) in time on task based on a basketball player's level of parental education. A Welch's F ($F(5, 325) = 1.52$, $p = .18$) validated these findings. Approximately 1% of the variability in time on task could be explained by highest level of parental education ($\eta^2 = .01$). Levels of time on task increased as highest level of parental education attained increased. This, however, did not hold true for the group of basketball players with at least one parent completing a graduate degree ($M = 2.64$, $SD = 0.55$). These results are shown in Table 38.

Table 38

Descriptive Statistics for Time on Task: Highest Level of Parental Education (N = 791)

Education Level	*M*	*SD*	95% CI *LL*	95% CI *UL*
Neither parent attempted college (*n* = 105)	2.65	0.56	2.54	2.76
At least one parent attempted college (*n* = 170)	2.71	0.57	2.62	2.79
At least one parent completed baccalaureate. (*n* = 144)	2.71	0.53	2.62	2.80
Both parents completed baccalaureate (*n* = 94)	2.74	0.54	2.63	2.85
At least one parent complete grad deg. (*n* = 187)	2.83	0.65	2.74	2.93
Both parents completed grad deg. (*n* = 91)	2.78	0.83	2.61	2.96

Note. $F(5, 785) = 1.56$, $p = .17$, $\eta^2 = .010$. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Summary

After analyzing the responses of over 800 male, college basketball players, it was determined that few statistical differences existed by athletic division, race, or level of parental education. Only one statistical test, of race and active learning, provided any significance in the data set. A summary of findings is presented in Table 39.

When analyzed by athletic division, the means of three of the four measures of engagement were inversely related to engagement. In other words, as the athletic division decreased (from Division I to Division III), engagement

also decreased. Active learning, however, increased as athletic division increased (from Division III to Division I). When the data were analyzed by race, each engagement variable followed a similar pattern with Non-Whites having a higher mean score than Whites.

Table 39

Summary of Statistical Significance by Division, Race and Parental Education

Variables	Statistical Significance
Division	
Active Learning	Not Significant
Collaboration	Not Significant
Interaction with Faculty	Not Significant
Time on Task	Not Significant
Race	
Active Learning	Significant
Collaboration	Not Significant
Interaction with Faculty	Not Significant
Time on Task	Not Significant
Parental Education	
Active Learning	Not Significant
Collaboration	Not Significant
Interaction with Faculty	Not Significant
Time on Task	Not Significant

The level of parental educational attainment provided inconsistent patterns across the four measures of engagement. Although three of the four measures of engagement saw increase in scores as the level of parental education increased, the results were not without outliers. Table 40 details the outliers in each of the four measures of engagement.

Table 40

Summary of Outlying Data for Measures of Engagement by Highest Level of Parental Education

Variable	Mean Pattern	Outlier
Active Learning	Decreased with parental education.	At least one parent completed a graduate degree.
Collaboration	Increased with parental education.	At least one parent completed a graduate degree.
Interaction with Faculty	Increased with parental education.	At least one parent completed a grad. degree
Time on Task	Increased with parental education.	At least one parent completed a graduate degree.

CHAPTER 5
DISCUSSION

Overview

Student engagement is an important piece of the retention puzzle (Astin, 1993; Kuh, 2009a; Pace, 1982; Tinto, 1993). Kuh et al. (2010) have defined engagement by emphasizing that both the institution and the individual have a responsibility in the education of college students. The institution must provide the necessary resources and environment for students to be successful. Also, students must engage in activities to bolster their educational experience. Likewise, Chickering and Gamson (1989) expressed the belief that both students and faculty members play vital roles in achieving good undergraduate education. Students are responsible for actively participating in class, working with other students on educational tasks, interacting with faculty members, and respecting diversity on campus. In addition to interacting with students, faculty members are charged with providing an environment that encourages students to spend time on academic work, actively participate in class, and cooperate with other students. Faculty members are also tasked with setting high expectations, giving prompt feedback, and respecting diverse talents on campus. The National Survey of Student Engagement (NSSE), similarly, revealed that the student and university play key roles in active and collaborative learning, interaction between faculty and students, engaging in enriching educational experiences, providing a

supportive campus environment, and encouraging academic challenge (Kuh, 2009a). The four practices for good undergraduate education that served as the framework for this study were: (a) active learning, (b) cooperation among students, (c) interaction with faculty, and (d) time on task. These four variables were chosen because students typically exercise some control over the efforts they contribute to these practices.

The four variables were examined in two ways: first, was the influence of the NCAA athletic division on levels of engagement; second, was the influence of demographic characteristics of race and parental education level on engagement. Athletic division was chosen because graduation rates for basketball players differ among athletic divisions, and overall, basketball players graduate at a rate lower than other student athletes (NCAA, 2011a; NCAA, 2011b). Demographic characteristics were chosen because of their strong influence on the retention process (Tinto, 1993).

Discussion

The subsequent discussion is organized around the results of the research conducted to answer the two questions that were posed to guide the study. Prior the analysis of data, a discussion of sampling and its impact on the results is had. The subsequent chapter examines the implications of this study for policy and practices as well as recommendations for future research.

Sampling

As shown in Chapter 4, the proportion of respondents by race is not congruent with the racial breakdown within the NCAA at large. Non-response bias is the result of those who respond to a questionnaire being some way different than those who did not (Dillman, Smyth & Christian, 2009). The non-response error could result in skewed data, with those who are more engaged being more likely to respond to a survey on engagement. However, the Center for Postsecondary Research has found that high school engagement was no an indicator of participation (NSSE, 2010). In other words, those students who were more engaged in high school were not more likely to respond to the survey than less engaged students. When examining the NSSE survey at large, the Center for Postsecondary Education found that on certain benchmarks, such as interaction with faculty, non-responders did not differ substantially from responders (NSSE, 2011c). However, certain measures of academic challenge did present evidence that a difference might occur between responders and non-responders. The Center for Postsecondary Research has identified that males and minority students are most likely to be non-respondents (NSSE, 2007). Thus it is no surprise to find Whites to be the largest racial demographic in this study. It is important to note that White students have been show to be less engaged than Non-white students (Flacks & Thomas, 1998; Hu & Kuh, 2002; Schlnsog, 2010). Given the overwhelming proportion of White respondents, the overall levels of engagement may be skewed. Thus, it must be noted that these

findings, then, may not be generalizable to the entire NCAA, basketball population due to a potential non-response bias.

Research Question1

Is there a difference in levels of engagement between Division I, Division II, and, Division III male collegiate basketball players as assessed by four measures of engagement: (a) active learning; (b) cooperation; (c) interaction with faculty; and (d) time on task?

Little research has been conducted to assess the extent to which student athletes engage in educationally purposeful activities (Comeaux et al., 2011; Gaston-Gayles & Hu, 2009). Only a few studies have been specifically focused on the educational experiences of college basketball players (Adler & Adler, 1991, Schroeder, 2000). In order to evaluate levels of engagement among college basketball players, sections of the NSSE survey were used. To compare engagement variables, composite variables representing each of the four measures of engagement were calculated. This allowed for the comparison of means in each engagement variable by athletic division. Figure 7 shows the overall mean score for each composite variable. Figure 8 shows the comparison of the average score for each variable by athletic division.

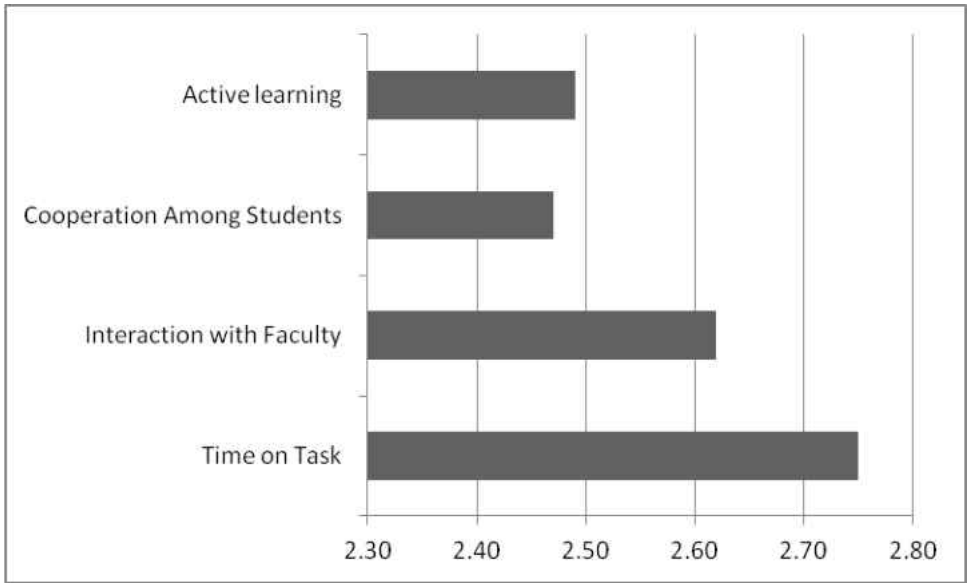


Figure 7. Means for Composite Variables: All Divisions

In examining the descriptive statistics of the average for the four variables, cooperation among students had the lowest average score among the four. This finding was expected based on the conclusions of various researchers. First, Crawford (2007) found revenue athletes and non-revenue athletes spent roughly equal time preparing for class with other students, with 65% spending 1-4 hours on such activities. In addition, numerous researchers have commented on the isolation of student athletes (Adler & Adler, 1991; Bell, 2009; Bowen & Levin, 2003; Hurley & Cunningham, 1984; Riemer et al., 2000; Shulman & Bowen, 2001). Researchers (Alder & Adler, 1991; Comeaux et al., 2011; Eitzen & Sage, 2003; Sellers et al., 1997) attributed isolation to the rigorous and demanding schedule of student athletes. Wolverton (2008) found revenue athletes dedicated more than 40 hours a week to their sport. This leaves little time for

involvement with students other than teammates. However, Aries, Banaji, McCarthy, and Salovey (2004) found that student athletes were no more isolated than other students. As shown in Figure 8, Division III athletes in the present study had the lowest average cooperation scores among all students. Symonds (2006) observed Division III revenue athletes spent more time on group work than other athletes. Thus, it was unexpected to find Division III athletes having the lowest score for cooperation among students.

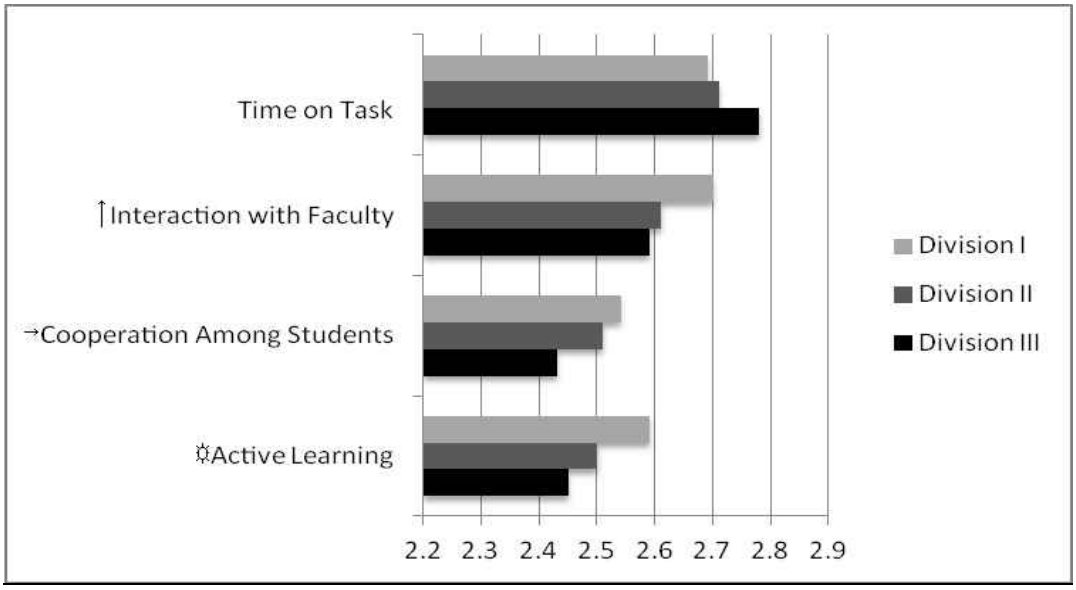


Figure 8. Means for Composite Variables by Athletic Division

Active learning had the second lowest average score among the four variables. Hathaway (2005) concluded student athletes and non-athletes had similar levels of active and collaborative learning. Additionally, Williams et al. (2006) deduced male student-athletes to be less engaged in active learning than

female athletes. These findings, however, were contradictory to those of Umbach et al. (2006) who found male and female student athletes to be equally engaged.

Interaction with faculty had the second highest average score of the four variables. It is not surprising that this variable scored relatively high compared to the other variables. Bell (2009) found all but one revenue athlete interviewed had a relationship with at least one faculty member. In addition, Crawford (2007) and Williams et al. (2006) observed student athletes to have higher interaction with faculty scores than non-athletes. Furthermore, revenue athletes showed higher instances of discussing career plans and seeking guidance from instructors than non-revenue athletes (Crawford, 2007). By the time they were upperclassmen, Schroeder (2000) found Division III basketball players to frequently interact with faculty members and value that interaction.

The variable with the highest average score was time on task. Researchers have arrived at conflicting results on the time student athletes spend on educationally purposeful activities. Hathaway (2005) concluded that student athletes spent less time studying than non-athletes. However, Symonds (2006) found student athletes spent more time studying than non-athletes. Crawford (2007) deduced revenue sport athletes spent less time on average studying or preparing for class than non-revenue sport athletes. In addition, she found the majority of student athletes believed they invested medium to very high

quality of effort in preparing for class. However, over 50% of student athletes spent less than eight hours preparing for class each week.

One-way ANOVAs were performed on each of the four composite variables to determine if any differences existed among athletic divisions. In general, the average scores for active learning, cooperation among students, interaction with faculty, and time on task were similar across athletic divisions. This finding was unexpected as it refuted similar research by Umbach et al (2006). Umbach et al. (2006) found Division III athletes to be more engaged in active and collaborative learning, interaction with faculty, and academic challenge than athletes in the other divisions. In this study, although the differences were not significant, Division I student athletes accounted for the highest average score in three categories: active learning, cooperation among students, and interaction with faculty. Results from the NSSE survey have generally shown students at smaller schools to be more engaged (Kuh, 2003). However, respondents from Division III institutions, smaller, liberal arts schools, had similar levels of engagement to those of students in other athletic divisions.

To summarize, descriptive statistics showed cooperation among students to have the lowest average score, and time on task to have the highest average score. When engagement, or the four variables of engagement, was analyzed, no statistical differences were found by athletic division. This indicated that no one athletic division was more or less engaged than another.

Research Question 2

What differences exist in the levels of engagement among basketball players when both student race and highest parental level of education are considered?

"Race and ethnicity along with family income are especially important because the nature of the undergraduate experience of historically underserved students can differ markedly from that of majority" (Kuh et al., 2008, p. 542). In addition to comparing the levels of engagement by athletic division, demographic factors were also investigated in order to assess their impact on engagement. Two demographic features, race and highest level of parental education, were chosen. An independent t-test showed few differences between White and Non-White. The variable of active learning provided the only statistical difference between the two groups. A comparison of scores by race is displayed in Figure 9.

On the one hand, these results were not surprising. Pike and Kuh (2005) found background characteristics provided little variance in levels of engagement. In addition, Gaston-Gayles and Hu (2009) found little influence of background characteristics on engagement, consistent with the findings of Kuh, Hu, and Vesper (2000) and Pascarella and Terenzini (2005). Likewise, Lundberg and Schreiner (2004) found that interacting with faculty members differed little by race. However, African American and Native American students reported the most frequent interaction with faculty. In contrast, Schlinsog (2010) discovered significant differences in engagement based on race, with White students

displaying lower levels of engagement than Non-White students. Moreover, Hu and Kuh (2002) found being White was associated with lower levels of engagement. Flacks and Thomas (1998) noticed a “culture of disengagement” (p. 4) among White students. While this study supports the previously stated literature, the sample used was disproportionally White, thus giving an incomplete picture of the overall picture of male, college basketball players are large.

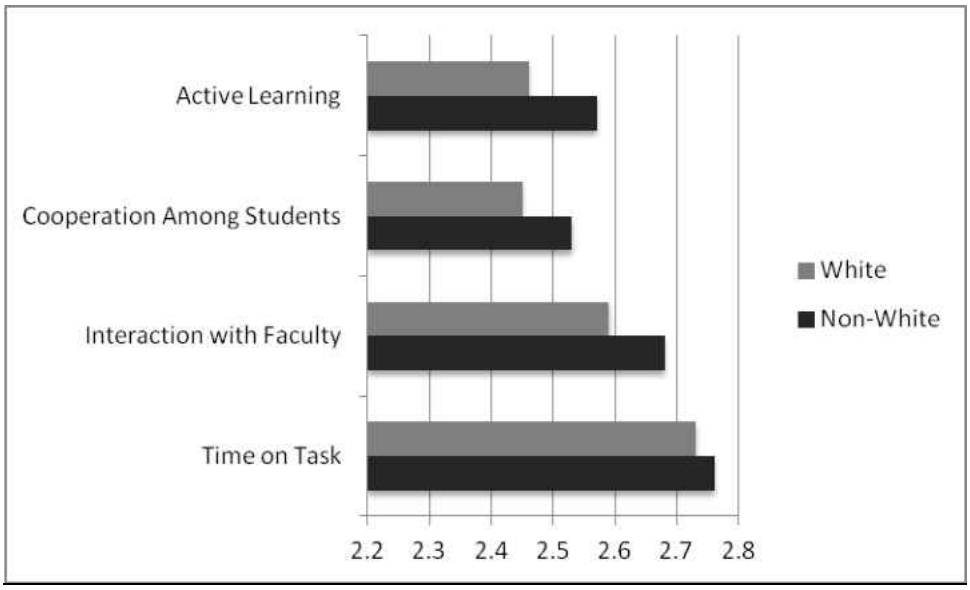


Figure 9. Means for Composite Variables by Race.

The variable of active learning, like the other variables in this study, was higher for Non-Whites than for Whites. It is important to note that much of the research on Non-white student athletes has focused on the experiences of African American student athletes. Little literature is available highlighting the

experiences of student athletes of other minority racial groups. Thus of this study to previous literature use the experiences of African American student athletes to encompass the Non-White demographic of this study. This finding contradicted the observations of Martin et al (2010) who found African American student athletes believed they had to overcome dual stereotypes, first as an athlete and second as an African American.

In addition to race, levels of engagement were compared based on a basketball player's highest level of parental education. Of the four variables tested (active learning, cooperation among students, interaction with faculty, and time on task), no differences were found between basketball players with differing backgrounds of parental education. Figure 10 displays these results.

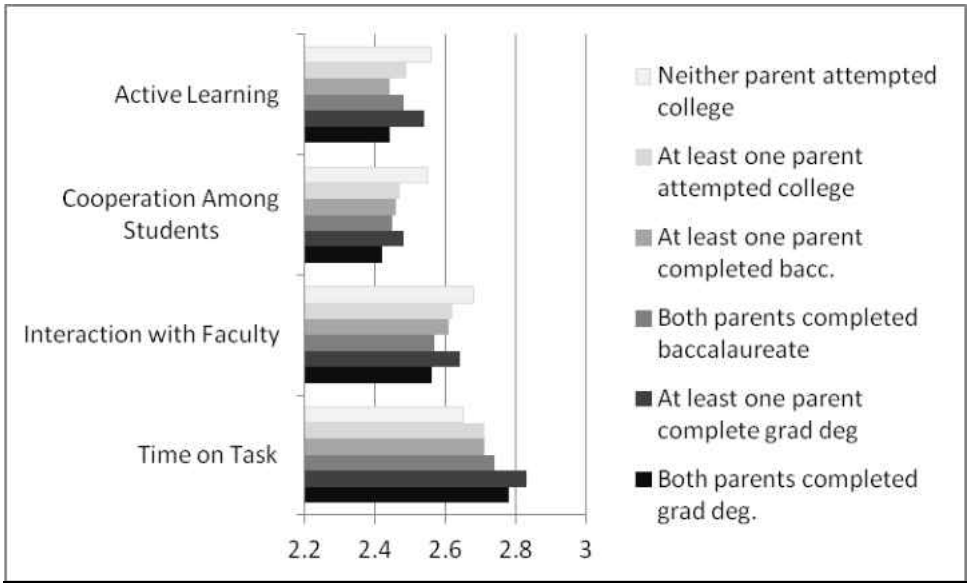


Figure 10. Means of Composite Variables by Highest Level of Parental Education

Finding no significant different in engagement among basketball players with differing backgrounds of parental educational attainment was surprising. In general, first-time-in-college students face numerous obstacles in higher education, including the lack of family or peers who understand the challenges and complexities in higher education (Phinney & Hass, 2003). It is generally thought that parents who have attended college transfer knowledge about their college experience to their children (Brewer & Landers, 2005). In contrast to the findings in the present study, Hu and Kuh (2002) found parental education positively influenced the extent to which a student engaged in educationally purposeful activities.

In summary, few differences in the four variables of engagement existed between basketball players' different backgrounds relative to race and highest level of parental education. The only significant difference occurred between White and Non-White students in the levels of active learning.

Summary

In summary, this study sought to examine the differences in engagement among basketball players at different athletic divisions and of different backgrounds. Four of Chickering and Gamson's (1989) seven principles for good undergraduate education guided in this study. Time on task had the highest average score of the four variables followed by interaction with faculty and active learning. Cooperation among students had the lowest average score

among the basketball players in this study. These findings demonstrated that regardless of athletic division, race, or parental education, basketball players displayed similar engaged in similar levels of educationally purposeful activities. The only significant difference was revealed between White and Non-White students in active learning. This findings in this study supported prior research showing Non-White students to be more engaged than White students. However, the findings in this study were at odds with those of other researchers who determined parental education was positively associated with levels of engagement. In this study, contrary to the literature reviewed, students at smaller schools were more engaged than those at larger institutions.

Engagement plays an important role in the retention and persistence of students (Astin, 1993; Pace, 1982; Tinto, 1993). With increased pressure for the true education of student athletes, it is necessary to investigate why certain groups of student athletes are failing to graduate at the rates of other student athletes. Male, collegiate basketball players are some of the worst offenders, with graduation and academic progress rates lagging behind the rest of their fellow student athletes.

CHAPTER 6
RECOMMENDATIONS

Overview

Although in this study, few differences and little statistical significance was found among male, college basketball players of differing divisions, race, and parental education, the findings were meaningful for several reasons. First, they signal the strength of the culture of the sport. Second, they break traditional assumptions of student development literature. Third, they provide implications for practitioners both inside and outside of athletes. In this chapter, the results presented in Chapter 4 and the discussion offered in Chapter 5, have been used to delve further into the meaning and significance of the findings by offering implications of the research for policy and practice and recommendations for future research.

Significant Results

The findings of this study ran counter to scholarship in both athletics and student development. Researchers have presumed Division III student athletes as displaying behaviors more in line with engagement than Division I or Division II student athletes. While much research has been done on student athletes, and more specifically on revenue sport athletes, their behaviors and relationships to their academics is still unclear. As institutions face greater penalties for student athletes not progressing toward a degree at rates set by the NCAA, research

needs to more fully understand student athletes and how they experience education. This study, exploring the connection between athletic division and background characteristics on engagement, illustrated that college basketball players were more similar to each other in their display of engagement than different. These findings provide a springboard to reinterpret the student athlete experience and direct future research.

Research Question 1 explored the connection between athletic division and engagement. The results were not consistent with what I believed I would find when I began this research. I expected, based on the literature review, to see a clear link between athletic division and engagement. I had anticipated that those basketball players at the smallest schools, i.e., Division III, would have been more engaged than those at the largest schools, i.e., Division I and Division II. This was not true. What I found was that athletic division had no bearing on the levels of engagement displayed by college basketball players.

Research Question 2 examined the connection between background characteristics and levels of engagement. I presumed that those basketball players whose parents had completed higher levels of education would be more engaged because they had a family member with college experience who could pass along valuable cultural capital. Again, this preconception was also refuted by my findings. I was unsure what this study would find in terms of the connection between race and engagement given the mix findings of prior research.

While great meaning was gleaned from the conclusions of this study, the research did not address the availability of enriching educational experiences or the opportunity to engage in educationally purposeful activities. In other words, this study cannot comment on whether engagement behaviors were not displayed because of the choice of the student athlete or the lack of an opportunity to do so. Moreover, this study cannot comment on the engagement of basketball player relative to other groups of athletes. The focus of this research was how college basketball players compared to each other on a set of given factors.

Discussion

After completing my research, and reflecting on the findings, I am led to two main conclusions: (a) college basketball players are more similar to each other in regards to academic engagement than is commonly thought; and (b) the results of my research reinforce the overwhelming influence of the "culture" of basketball. In regard to the first conclusion, that college basketball players are more similar to each other than is commonly thought, one must consider the "dumb jock" stereotype frequently applied to Division I student athletes. Common stereotypes have cast the Division I player as more focused on athletics than education. The results of this study begin to dispel myths that Division I student athletes are less academically focused than those in Divisions II or III. Division III basketball players are commonly thought of as more of a

student because they do not receive of any form of an athletic scholarship, consequently creating loyalty to the institution and not the athletic department. In addition, Division III athletics is seen as more amateur than Division I and less impacted by the commercialization of upper division athletics. Lower division basketball players are seen as having less chance at a professional sports career, with only four players being drafted into the NBA between 1996 and 2007 (National Basketball Association, 2007).

Division I student athletes, particularly those participating in revenue sports, report feelings of discrimination by faculty members and fellow students because they are seen as “dumb jocks” and not seen as serious students. Stereotyping has been shown to result in decreased desire to interact with faculty and can negatively impact academic achievement. Faculty members need to re-evaluate their perception of the student athletes they have in their classrooms and become partners in positively shaping the academic experience of student athletes.

In regard to the second conclusion, that the “culture” of basketball is a powerful force, it is clear, based on the findings of this study, that the culture of college basketball knows no bounds, impacting players regardless of athletic division or background. A culture can impact nearly every part of a student’s undergraduate experience (Kuh 2001). Literature, however, is scare on the direct impacts of culture on student outcomes. In essence, these findings have signaled a cultural uniformity within college basketball. In *Blackboards and*

Backboards, Adler and Adler (1991) described the commercialized nature of college basketball and the increasing cohesion and disengagement of the players. The results of the present study indicated a basketball culture larger than college basketball. The commercialized nature of college basketball is only increasing, as more teams are invited to play in the NCAA basketball tournament and as the publicity for competing in it becomes more valuable. In addition, the consistent stream of televised games only adds to the exposure of athletics and creates a perception of importance of winning for the players.

Basketball players are socialized into this culture at an early age while playing on the Amateur Athletic Union (AAU) circuit and traveling around the county to play in corporate sponsored tournaments. AAU players from across the county are united through tournament play, technology, and social media; and the basketball culture spreads quicker than ever before. Additionally, with an average of 12 players per team who spend countless hours together, it is not surprising similarities exist between players and among teams.

Researchers have tried to understand the athletic culture on college campuses. Often times it is pointed to as having a negative influence on a player's student role. Academic achievement can be negatively influence by an incompatible relationship between the larger campus culture and a group's subculture (Kuh & Love, 2000). If the team culture is an undeniably strong influence on a player's academic behaviors, a full understanding of the culture, its role, and how to influence it is essential for policy makers and practitioners. In

order to begin to influence a team's culture, an awareness of the symbols and artifacts the team values is necessary. These might include awards or championships, a signature win, a star player, or a coach. Manipulating the culture of a team is a complex task. Because a portion of a team turns over each year, there is an opportunity to amend its culture. More consistent than the set of players on a is the coaching staff, who play a vital role in shaping a team, through recruiting prospective players, socializing new players, and reinforcing the culture for current players. The coaching staff, as well as the athletic department, can help redefine the symbols and artifacts held be the team in order to progress the culture to a desirable state.

While the conclusions in this study are supported by the data analysis of the 2008 NSSE survey, the study and its findings were limited in a few days. Because the researcher utilized archival data for the analysis of this study, a sample reflective of the NCAA college basketball was not achieved. The racial demographics within the study are not inline with the overall demographics of college basketball players within the NCAA. Given the large proportion of White, college basketball players in this study, and their exhibition of lower levels of engagement, the findings of this study may not be an overall representation of engagement among all groups within the college basketball. In addition, for statistical purposes, minority groups other than White were grouped together as Non-Whites. Most of the literature on minority student athletes has centered on the experiences of African Americans. That literature was used to validate the

findings in this study. The voices and experiences of the seven other minority racial groups were compared to the literature on African American student athletes. The application of such research will prove to be valid or invalid only after the literature on student athletes grows to be more inclusive of experiences of less representative minority groups.

Implications for Policy Bodies

The NCAA has been responsible for developing policies governing the academic expectations and behavior for each of its three athletic divisions. In order to create effective policies, the NCAA needs to know more about the similarities and differences in student athletes' educational experiences. Countless books have been written that present a picture of the disengaged student athlete. Though these books contain statistics on subpar graduation rates and academic performance, they do not address the time and effort student athletes are investing in educationally purposeful activities. Additionally, these books claim Division I athletics to be the more egregious offenders. This present study presents a different reality, that basketball players are more similar than different in levels of engagement. This means that the policy makers in university administration and the NCAA need to rethink their assumptions of student athletes.

A cultural change is necessary to begin to break the status quo in college basketball. The NCAA has the opportunity to both provide the leadership for a

top-down cultural change as well as supplying environmental pressure to encourage individual institutions to adapt the culture of their teams. Programs such as the Lowe's Senior CLASS Awards and Scholar Baller aim to highlight academic achievement of student athletes and are examples of actions that could provide motivation to make positive change. The Lowe's Senior CLASS award recognizes Division I student athletes in various sports who excel in "four areas: community, classroom, character and competition" (Senior CLASS Awards, 2012). The nominees and the recipients of this award are broadcast during the NCAA basketball tournament. However, such tribute to basketball players happens only once a season. In addition, it only honors Division I players. More recognition is needed to identify players who are excelling inside the classroom.

The purpose of the Scholar Baller program is to help student athletes find an identity outside of athletics and within their role as a college student. Myles Brand, former NCAA president, described the program as "a well-conceived successful way to recognize and reward academic achievement by student-athletes" (Scholar Baller, 2011). Scholar Baller recognizes both individual student athletes and institutions that have made a commitment to excelling in academics. More avenues for recognition are necessary to highlight those basketball players who value their academic lives in order to model success to other and future players.

In addition to analyzing the culture of college basketball, the NCAA and participating institutions need to explore why certain groups of basketball players graduate at rates less than others even though levels of engagement are consistent across division and background. In 2010, 91% of White, Division I basketball players graduated in contrast to 59% of African American basketball players. Additionally, over the years, African American student athletes have made smaller gains in graduation rates than White athletes. During the prior academic year, White basketball players increased their graduate rate by 7%, but African American players only increased their graduate rate by 4% (Lapchick, 2011). It is imperative to learn what other factors could be contributing to the graduation gap.

The student affairs profession can garner important lessons from this present study. The profession is taught to celebrate the diversity on college campuses and create programs to cater to the differences within the student body. What can be taken away from this study is that a college or university can create a culture on its campus that allows students with different backgrounds to act more similar. While a cultural change of this size would be a long and difficult process, the new culture could mitigate a variety of background factors, allowing students to more similarly display behaviors associated with engagement.

Implications for Coaches and Athletic Support Staff

The coach is said to be the single largest influence on the academic success of a student athlete (Rivera, 2004). Thus, the coach plays an instrumental part in shaping and guiding the culture of the team. Often times, coaches in high profile sports are seen as valuing athletics over academics (Adler & Adler, 1991; Ridpath, 2006). Because coaches typically have such a strong influence on their student athletes, it is crucial that they socialize their student athletes into the world of academics and set an example of academic value. Partnering with academic staff, and more importantly faculty members, will change the negative perception of faculty members held by student athletes and encourage them to seek out these professionals in times of need. Additionally, partnering with faculty members, athletic support professionals can reshape how faculty perceive student athletes, breaking down athletic stereotypes.

Coaches need to be fully immersed into the culture of their team. They need to be aware of the values and symbols their team cherishes. When the team culture begins to veer in an undesirable direction, it is up to the coach to re-interpret those treasured symbols in order to readjust the culture. In addition, the coach needs to provide stimulants, both positive and negative, to keep the culture of his or her team focused academic achievement. It is essential for coaches to continue to discuss the importance of academics in season and

recognize the academic success of the players, in addition to recognizing their athletic successes.

Although few statistically significant results emerged from this study, Non-White and White basketball players differed in their behaviors related to active learning (defined as engaging in actions such as participating in class, contributing to class discussion, and making a presentation in class). Researchers have shown that student athletes tend to cluster into similar majors and often take many of the same classes (Bowen & Levin, 2003; Shulman & Bowen, 2001). Given that student athletes are enrolled in similar courses, athletic support professionals should examine why they are experiencing the classroom differently and augment their programming accordingly.

Cultural uniformity, as seen in this study, has been shown to hold true across other teams and sports (Tranyowicz**,** Harrison, Kirkland-Lawrence, Botts, Bukstein, unpublished manuscript). Academic programming should take into account the cultures of various teams in order to create effective programming. Focusing less on the differences within a team of athletes, which this study has shown do little to influence engagement behavior, athletic support professionals need to look at the similarities between the student athletes and the reasons for those similarities to inform their practice and programming. Additionally, programming can be structured to reinforce the positive aspects within a team's culture in order to enhance the strength of the culture. This study cannot speak to

differentiation between sports; further research is needed to explore those differences.

Implications for Germane Literature and the Seven Principles for Good Undergraduate Education

For this study, engagement was defined using four of the seven principles for good undergraduate education (Chickering & Gamson, 1987). Players demonstrated these practices at similar rates with the exception of active learning where a graduate gap was shown to exist by athletic division and by race. Although Division I and Division II players were similarly engaged, Division II players have been shown to graduate at a rate higher than Division I players. In addition, though Non-White and White players were similar engaged, and Non-Whites were more engaged in active learning. These findings signify that engagement and engagement behaviors are only one piece of the academic success puzzle. Players who behave similarly are not necessarily achieving at the same rate. Institutional influences, or measures of engagement not measured by this study, may be a factor in the achievement gap. The extent to which the institution provides support that allows the student athlete to academically and socially successful was not measured in this present study. Moreover, the extent to which institutions respect the diversity of students on their campus and provide a supportive campus environment can play a role in a campus climate that impacts student success. Also not measured was the extent to which institutions provide the necessary resources for student success.

This research has contributed to the literature on student engagement. Most student engagement theory from Astin (1984) to Kuh (2003) has been conducted on the traditional college student. In this study, groups of student athletes have been shown to defy those theories that have been deemed appropriate for traditional students. Engagement theory does not take into consideration the overwhelming influence of a group's culture and that culture can mitigate other factors that have been shown to be strong influences of engagement. A strong culture will make those in the group who are different more similar in nature.

Implications for Future Research

This research has contributed to the body of literature on the engagement of student athletes, namely college basketball players, and has offered insight into male, college basketball players and the intersection of engagement and athletic division. This study provided a first step in understanding male, college basketball players, but there are numerous avenues that remain to be explored.

First, although this study considered engagement from a student perspective, future studies should be conducted to investigate the institutional contribution to student engagement. Kuh et al. (2010) found that student success is a combination of the both time and energy invested by the student and the "educational effectiveness" (p. 9) of the university. Thus, an investigation is warranted looking at engagement from an organizational perspective. That

investigation may be informative to practitioners or athletic directors within the institutions being studied by analyzing the classroom environment and the ability to engage in active and collaborative learning, the supportiveness of the campus environment, and the respect for diversity on campus. In addition, research should be conducting linking the availability of financial resources to levels of engagement. In other words, are schools with more money to support the academic development of student athletes producing more engaged student athletes?

Second, future research should delve further into the experiences within each athletic division. For example, Division I is comprised of a diverse array of institutions. Thus, future researchers should examine differences in engagement among various athletic conferences within each athletic division. As a result, policy and practice could be more effectively designed to augment the specific experiences of basketball players at various institutions.

Third, this study could be done using qualitative research methodologies. A critique of the NSSE survey has been that it can measure quantity but not quality of effort. Hence, a qualitative survey could begin to build on the quality of college basketball player experience and a more in-depth picture of how they experience college could be shown.

The influence of sport culture on the engagement of its players should inform future research on college student athletes. Studies have pointed out the damaging influence of an athletic subculture on academic aspirations of student

athletes. A measure of cultural influence is important to explore in order to better shape programs and policies designed to enhance student success. In addition to gaining a more sound understanding of sport culture, athletic support professionals and coaches can strategically influence and shape the culture to encourage a greater emphasis on the student role of student athletes. Consequently, a replication of Adler and Adler's 1991 study is recommended. When Adler and Adler completed their study in the early 1980s, the landscape of youth and college basketball was quite different. AAU teams were less influential, and the college game was less commercialized than today. Given this study concludes the culture of basketball provides a large influence on the engagement of college basketball players, a cultural scan of college basketball is needed to paint a current picture of the sport.

Fifth, this study should be replicated using women basketball players. Graduation rates and APR measures have begun to show that women's players are acting in ways more consistent with their male counterparts. Thus, an investigation of their habits is warranted.

Finally, though this study provided a unique insight into the academic behaviors of male, college basketball players, engagement scores that have been calculated can only be compared within the group, by division, by race, or by parental education. This research did not consider how the levels of engagement of college basketball players compare to players in other sports. Therefore, a future study should be conducted to compare these results to

findings for other collegiate sports in order to comment on the relational levels of engagement of various sports within the NCAA.

Conclusion

Albeit the lack of statistical significance in this study, the results provide space to ponder regarding the indirect qualitative meaningfulness of the findings and concomitant implications for practice. The results of divisional analysis and levels of parental education analysis have run counter to much of the available scholarship. The analysis of race and engagement was both in line with and counter to the literature. These results have indicated the overwhelming influence of the culture of college basketball, which originates at lower levels of basketball. In addition, the results debunked the myths of the "dumb jock" Division I player, showing players in Division I, II, and III all demonstrated similar amounts of engagement behaviors.

The implications of this study are plentiful, impacting the seven principles of good undergraduate education and student engagement literature. With equivocal levels of engagement across division and race, achievement gaps still exist, signaling other factors at play in the academic lives of college basketball players. Theories developed around the traditional student population might not be applicable to the basketball and student athlete population because they are deemed a unique group within the student body.

The NCAA, athletic coaches, and student development staff all play key roles in the development of basketball players. The NCAA acknowledges the culture of college basketball but needs to do more to promote academic excellence within the sport. Coaches are the most important influence on the academic achievement of student athletes and should be more involved in promoting and mirroring academic values. Student development professionals, which celebrate diversity within student populations, can embrace the uniformity among student groups and help shape the influential culture within sport groups. Finally, the findings of this study provide a unique insight to the academic lives of college basketball players and provides a stepping-stone for future research.

APPENDIX A
PERMISSION TO ADAPT FIGURE 1

Jessica Simmons November 2, 2012 8:03 AM

To: Ginny Betts <ginny.betts@knights.ucf.edu>

RE: One last favor

Hey Ginny,

That is fine. Please just cite appropriately...adapted from...etc.

Thanks,

Jessica Simmons, Ed.D.
Academic Advisor
Interdisciplinary Studies
University of Central Florida
407-823-0144
jessica.simmons@ucf.edu

APPENDIX B
NATIONAL SURVEY OF STUDENT ENGAGEMENT (NSSE)

Items 1a, 1b, 1g, 1h, 1j, 1k, 1m, 1n, 1o, 1p, 1q, 1s, 1t, 3a, 3c, 3d, 3e, 4a, 4b, 7d, and 9a used with permission from *The College Student Report,* National Survey of Student Engagement, Copyright 2001-12 The Trustees of Indiana University

National Survey of Student Engagement 2008

The College Student Report

1 **In your experience at your institution during the current school year, about how often have you done each of the following? Mark your answers in the boxes. Examples: ☒ or ■**

	Very often	Often	Some-times	Never
a. Asked questions in class or contributed to class discussions	☐	☐	☐	☐
b. Made a class presentation	☐	☐	☐	☐
c. Prepared two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
d. Worked on a paper or project that required integrating ideas or information from various sources	☐	☐	☐	☐
e. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments	☐	☐	☐	☐
f. Come to class without completing readings or assignments	☐	☐	☐	☐
g. Worked with other students on projects **during class**	☐	☐	☐	☐
h. Worked with classmates **outside of class** to prepare class assignments	☐	☐	☐	☐
i. Put together ideas or concepts from different courses when completing assignments or during class discussions	☐	☐	☐	☐
j. Tutored or taught other students (paid or voluntary)	☐	☐	☐	☐
k. Participated in a community-based project (e.g., service learning) as part of a regular course	☐	☐	☐	☐
l. Used an electronic medium (listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment	☐	☐	☐	☐
m. Used e-mail to communicate with an instructor	☐	☐	☐	☐
n. Discussed grades or assignments with an instructor	☐	☐	☐	☐
o. Talked about career plans with a faculty member or advisor	☐	☐	☐	☐
p. Discussed ideas from your readings or classes with faculty members outside of class	☐	☐	☐	☐
q. Received prompt written or oral feedback from faculty on your academic performance	☐	☐	☐	☐
r. Worked harder than you thought you could to meet an instructor's standards or expectations	☐	☐	☐	☐
s. Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)	☐	☐	☐	☐
t. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)	☐	☐	☐	☐
u. Had serious conversations with students of a different race or ethnicity than your own	☐	☐	☐	☐
v. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values	☐	☐	☐	☐

2 **During the current school year, how much has your coursework emphasized the following mental activities?**

	Very much	Quite a bit	Some	Very little
a. **Memorizing** facts, ideas, or methods from your courses and readings so you can repeat them in pretty much the same form	☐	☐	☐	☐
b. **Analyzing** the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	☐	☐	☐	☐
c. **Synthesizing** and organizing ideas, information, or experiences into new, more complex interpretations and relationships	☐	☐	☐	☐
d. **Making judgments** about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions	☐	☐	☐	☐
e. **Applying** theories or concepts to practical problems or in new situations	☐	☐	☐	☐

3 **During the current *school year*, about how much reading and writing have you done?**

a. Number of assigned textbooks, books, or book-length packs of course readings

☐ None ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ More than 20

b. Number of books read on your own (not assigned) for personal enjoyment or academic enrichment

☐ None ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ More than 20

c. Number of written papers or reports of **20 pages or more**

☐ None ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ More than 20

d. Number of written papers or reports **between 5 and 19 pages**

☐ None ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ More than 20

e. Number of written papers or reports of **fewer than 5 pages**

☐ None ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ More than 20

4 **In a *typical week*, how many homework problem sets do you complete?**

	None	1-2	3-4	5-6	More than 6
a. Number of problem sets that take you **more** than an hour to complete	☐	☐	☐	☐	☐
b. Number of problem sets that take you **less** than an hour to complete	☐	☐	☐	☐	☐

5 **Mark the box that best represents the extent to which your examinations during the current school year have challenged you to do your best work.**

Very little ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Very much

6 **During the current school year, about how often have you done each of the following?**

	Very often	Often	Some-times	Never
a. Attended an art exhibit, play, dance, music, theater, or other performance	☐	☐	☐	☐
b. Exercised or participated in physical fitness activities	☐	☐	☐	☐
c. Participated in activities to enhance your spirituality (worship, meditation, prayer, etc.)	☐	☐	☐	☐
d. Examined the strengths and weaknesses of your own views on a topic or issue	☐	☐	☐	☐
e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	☐	☐	☐	☐
f. Learned something that changed the way you understand an issue or concept	☐	☐	☐	☐

7 **Which of the following have you done or do you plan to do before you graduate from your institution?**

	Done	Plan to do	Do not plan to do	Have not decided
a. Practicum, internship, field experience, co-op experience, or clinical assignment	☐	☐	☐	☐
b. Community service or volunteer work	☐	☐	☐	☐
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	☐	☐	☐	☐
d. Work on a research project with a faculty member outside of course or program requirements	☐	☐	☐	☐
e. Foreign language coursework	☐	☐	☐	☐
f. Study abroad	☐	☐	☐	☐
g. Independent study or self-designed major	☐	☐	☐	☐
h. Culminating senior experience (capstone course, senior project or thesis, comprehensive exam, etc.)	☐	☐	☐	☐

8 **Mark the box that best represents the quality of your relationships with people at your institution.**

a. Relationships with **other students**

Unfriendly, Unsupportive, Sense of alienation ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Friendly, Supportive, Sense of belonging

b. Relationships with **faculty members**

Unavailable, Unhelpful, Unsympathetic ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Available, Helpful, Sympathetic

c. Relationships with **administrative personnel and offices**

Unhelpful, Inconsiderate, Rigid ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Helpful, Considerate, Flexible

9 **About how many hours do you spend in a typical 7-day week doing each of the following?**

a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

b. Working for pay **on campus**

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

c. Working for pay **off campus**

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

d. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

e. Relaxing and socializing (watching TV, partying, etc.)

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

f. Providing care for dependents living with you (parents, children, spouse, etc.)

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

g. Commuting to class (driving, walking, etc.)

☐ 0 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ More than 30
Hours per week

10 **To what extent does your institution emphasize each of the following?**

	Very much	Quite a bit	Some	Very little
a. Spending significant amounts of time studying and on academic work	☐	☐	☐	☐
b. Providing the support you need to help you succeed academically	☐	☐	☐	☐
c. Encouraging contact among students from different economic, social, and racial or ethnic backgrounds	☐	☐	☐	☐
d. Helping you cope with your non-academic responsibilities (work, family, etc.)	☐	☐	☐	☐
e. Providing the support you need to thrive socially	☐	☐	☐	☐
f. Attending campus events and activities (special speakers, cultural performances, athletic events, etc.)	☐	☐	☐	☐
g. Using computers in academic work	☐	☐	☐	☐

11 **To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?**

	Very much	Quite a bit	Some	Very little
a. Acquiring a broad general education	☐	☐	☐	☐
b. Acquiring job or work-related knowledge and skills	☐	☐	☐	☐
c. Writing clearly and effectively	☐	☐	☐	☐
d. Speaking clearly and effectively	☐	☐	☐	☐
e. Thinking critically and analytically	☐	☐	☐	☐
f. Analyzing quantitative problems	☐	☐	☐	☐
g. Using computing and information technology	☐	☐	☐	☐
h. Working effectively with others	☐	☐	☐	☐
i. Voting in local, state, or national elections	☐	☐	☐	☐
j. Learning effectively on your own	☐	☐	☐	☐
k. Understanding yourself	☐	☐	☐	☐
l. Understanding people of other racial and ethnic backgrounds	☐	☐	☐	☐
m. Solving complex real-world problems	☐	☐	☐	☐
n. Developing a personal code of values and ethics	☐	☐	☐	☐
o. Contributing to the welfare of your community	☐	☐	☐	☐
p. Developing a deepened sense of spirituality	☐	☐	☐	☐

12 **Overall, how would you evaluate the quality of academic advising you have received at your institution?**

☐ Excellent
☐ Good
☐ Fair
☐ Poor

13 **How would you evaluate your entire educational experience at this institution?**

☐ Excellent
☐ Good
☐ Fair
☐ Poor

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

☐ Definitely yes
☐ Probably yes
☐ Probably no
☐ Definitely no

15 Write in your year of birth: 1 9 _ _

16 Your sex:
- ☐ Male
- ☐ Female

17 Are you an international student or foreign national?
- ☐ Yes
- ☐ No

18 What is your racial or ethnic identification? (Mark only one.)
- ☐ American Indian or other Native American
- ☐ Asian, Asian American, or Pacific Islander
- ☐ Black or African American
- ☐ White (non-Hispanic)
- ☐ Mexican or Mexican American
- ☐ Puerto Rican
- ☐ Other Hispanic or Latino
- ☐ Multiracial
- ☐ Other
- ☐ I prefer not to respond

19 What is your current classification in college?
- ☐ Freshman/first-year
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ Unclassified

20 Did you begin college at your current institution or elsewhere?
- ☐ Started here
- ☐ Started elsewhere

21 Since graduating from high school, which of the following types of schools have you attended other than the one you are attending now? (Mark all that apply.)
- ☐ Vocational or technical school
- ☐ Community or junior college
- ☐ 4-year college other than this one
- ☐ None
- ☐ Other

22 Thinking about this current academic term, how would you characterize your enrollment?
- ☐ Full-time
- ☐ Less than full-time

23 Are you a member of a social fraternity or sorority?
- ☐ Yes
- ☐ No

24 Are you a student-athlete on a team sponsored by your institution's athletics department?
- ☐ Yes
- ☐ No (Go to question 25.)

On what team(s) are you an athlete (e.g., football, swimming)? Please answer below:

25 What have most of your grades been up to now at this institution?
- ☐ A
- ☐ A-
- ☐ B+
- ☐ B
- ☐ B-
- ☐ C+
- ☐ C
- ☐ C- or lower

26 Which of the following best describes where you are living now while attending college?
- ☐ Dormitory or other campus housing (not fraternity/sorority house)
- ☐ Residence (house, apartment, etc.) within **walking distance** of the institution
- ☐ Residence (house, apartment, etc.) within **driving distance** of the institution
- ☐ Fraternity or sorority house

27 What is the highest level of education that your parent(s) completed? (Mark one box per column.)

Father	Mother	
☐	☐	Did not finish high school
☐	☐	Graduated from high school
☐	☐	Attended college but did not complete degree
☐	☐	Completed an associate's degree (A.A., A.S., etc.)
☐	☐	Completed a bachelor's degree (B.A., B.S., etc.)
☐	☐	Completed a master's degree (M.A., M.S., etc.)
☐	☐	Completed a doctoral degree (Ph.D., J.D., M.D., etc.)

28 Please print your major(s) or your expected major(s).

a. Primary major (Print only one.):

b. If applicable, second major (not minor, concentration, etc.):

THANKS FOR SHARING YOUR RESPONSES!

After completing the survey, please put it in the enclosed postage-paid envelope and deposit it in any U.S. Postal Service mailbox. Questions or comments? Contact the National Survey of Student Engagement, Indiana University, 1900 East Tenth Street, Eigenmann Hall Suite 419, Bloomington IN 47406-7512 or nsse@indiana.edu or www.nsse.iub.edu.

National Survey of Student Engagement. (2008). National Survey of Student Engagement 2008. Retrieved from http://nsse.iub.edu/html/survey_instruments.cfm?survey_year=2008

APPENDIX C
UNIVERSITY OF CENTRAL FLORIDA
INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

NOT HUMAN RESEARCH DETERMINATION

From : **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To : **Mary McPherson Botts**

Date : **July 18, 2012**

Dear Researcher:

On 7/18/2012 the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review:	Not Human Research Determination
Project Title:	Levels of engagement among male, collegiate basketball players
Investigator:	Mary McPherson Botts
IRB ID:	SBE-12-08568
Funding Agency:	
Grant Title:	
Research ID:	N/A

University of Central Florida IRB review and approval is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are to be made and there are questions about whether these activities are research involving human subjects, please contact the IRB office to discuss the proposed changes.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 07/18/2012 04:57:59 PM EDT

IRB Coordinator

APPENDIX D
NSSE DATA SHARING AGREEMENT

NSSE
national survey of
student engagement

Indiana University Center for Postsecondary Research
Data Sharing Agreement

This Indiana University Center for Postsecondary Research Data Sharing Agreement ("Agreement") defines the parameters for data sharing from the National Survey of Student Engagement ("NSSE") between the Research Institution and its Authorized Researchers named below and the Trustees of Indiana University on behalf of the Indiana University Center for Postsecondary Research ("IUCPR"). The terms below are intended to reflect and comply with the existing agreements between NSSE and the institutions that participate in the survey program. Under these participation agreements, NSSE may:

> *"...make data, in which individual institutions or students cannot be identified, available to researchers interested in studying the undergraduate experience... NSSE results specific to each institution and identified as such will not be made public except by mutual agreement between NSSE and the institution."*

RESEARCHERS

The following researchers ("Authorized Researchers") of **University of Central Florida** ("Research Institution") may make use of NSSE data pursuant to the terms of this Agreement:

Mary Botts	**University of Central Florida**
Rosa Cintron, PhD	**University of Central Florida**

DATA DESCRIPTION

Under this Agreement, IUCPR will provide the researchers a data file delimited in the following ways ("NSSE Data File"):

- Data Source: **NSSE 2008**
- Variables: **All survey items and scales. In addition, one institutional characteristic provided by Mary Botts will be included (NCAA Athletic Division). All institutional characteristics will each be in ranges/categories that include at least 5 institutions. All student and institution identifying information will be removed.**
- Cases: **All 611 first-year and 461 senior students who are male college basketball players and attended U.S. institutions**

NSSE
national survey of
student engagement

PARAMETERS FOR DATA SHARING:

1. IUCPR will provide a single copy of the NSSE Data File solely for non-commercial research by the Authorized Researchers.

2. The NSSE Data File will exclude the Unit ID code from Integrated Postsecondary Educational Data System (IPEDS), any other unique school or student identifiers, and any variables that IUCPR determines reasonably may permit the identification of a participating school or student.

3. The Authorized Researchers will not make any attempt, privately or publicly, to associate elements of the NSSE Data File with the individual institutions or individual students participating in the NSSE, nor will they share the data with anyone else who might do so.

4. In all publications or presentations of data obtained through this agreement, the Authorized Researchers agree to include the following citation: "NSSE data were used with permission from The Indiana University Center for Postsecondary Research."

5. The Authorized Researchers agree to provide to IUCPR a copy of all reports, presentations, analyses, or other materials in which the data given under this Agreement are presented, discussed, or analyzed.

6. **The data should be encrypted when not in use by the above researcher and should be destroyed once this particular research project (dissertation) has been completed. If the researcher needs the data for any longer period than that which is necessary for completing the dissertation, the researcher is required to ask for an extension. Using the data for other purposes besides completing the designated project (dissertation) must be approved by the Director for the Center for Postsecondary Research at Indiana University at Bloomington.**

7. The IUCPR of Indiana University may, by written notification to the Authorized Researchers and the Research Institution, terminate this Agreement if it determines, in its sole discretion, that either the Authorized Researchers or the Research Institution have breached the terms of this Agreement. In the event that this Agreement is terminated, the Authorized Researchers and Research Institution shall return the originals and all copies of the NSSE Data File to the IUCPR, and securely destroy all NSSE Data File elements contained in any analyses or other materials created or maintained by Authorized Researchers, within ten (10) days of the receipt of the termination notice. Nothing herein shall prevent retention of any materials for legal and archival purposes only.

8. IU will not be liable to the Research Institution for any direct, consequential, or other damages, related to the use of the NSSE Data File or any other information delivered by Indiana University or IUCPR in accordance with this Agreement. To the extent permitted by law, the Research Institution shall defend, indemnify, and hold harmless The Trustees of Indiana University, their officers, employees, and agents, with respect to any and all

NSSE
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student engagement

claims, causes of action, losses, and liabilities, of any kind whatsoever, arising directly or indirectly from the Authorized Researchers' use of the NSSE Data File.

9. FEES

In exchange for access to and use of the NSSE Data File, Mary Botis agrees to pay Indiana University the sum of $525, by check upon execution of this Agreement;

SIGNATURES

The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

Amy O'Hair
Contract Officer
Office of Research Administration
Indiana University

7/24/12
Date

Alexander C. McCormick
Director,
National Survey of Student Engagement

7/24/2012
Date

For the Research Institution:

Name, Title, and Organization
Authorized Institutional Official of Research Institution

Jane C. Griffin
Assistant Director, Contracts + Grants

7/20/2012
Date

NSSE
national survey of
student engagement

Acknowledgment of Authorized Researchers:

Mary Botts — 6/2/12
Mary Botts
Doctoral Student
University of Central Florida
Date

Rosa Cintron, PhD — 6-12-12
Rosa Cintron, PhD
Dissertation Advisor
University of Central Florida
Date

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