Gaining Gold Medals and Gowns: Equilibrating the Dual Career of Student-Athletes with Online Education

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By

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(ABSTRACT)

Student-athletes must constantly balance their athletic, academic, and social roles. Their dual career can easily be overwhelming. Missing classes because of intense travel can be disruptive to the flow of classes and material. Online education is one way to provide a personalized, portable, on-demand learning environment that is flexible regarding both time and location, doesn't require travel to and from campus, is self-paced, and is provided at the learner's convenience.

The purpose of this study was to determine general concerns experienced by Virginia Tech student-athletes, as well as their perceptions and practices about online education. Understanding student-athletes' needs and wants can help promote high quality online course development. In addition, it allows educators to tailor marketing specifically to student-athletes and increases the likelihood that students will experience positive online learning experiences.

Data was collected using focus group discussions, key informant interviews, and a demographic questionnaire. Student-athletes from all varsity teams were purposively selected for two revenue sports sessions and two non-revenue sports sessions targeting 6-8 athletes in each group. Five key informant interviews were conducted with personnel from the athletic department.

Participants seemed to want the best of both worlds, preferring the convenience of online courses, but also desiring regular contact and interaction with faculty and other class members (social component). The non-revenue athletes preferred taking classes in a traditional classroom to learn material. They preferred taking online classes when they travel, for time issues, or easy credit. Though all student-athletes stated that they took advantage of online classes, the revenue athletes seemed to appreciate them more and were more willing to take more online classes to help ease their schedule. A purely online education program would not result in balance.

DEDICATION

I would like to dedicate this dissertation to the student-athletes

whom I worked with, competed with, practiced with, traveled with, lived with, spent time with, learned with, learned from, and whom I admire.

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CHAPTER 1

Introduction

The XXIX Olympiad in Beijing, China, is quickly approaching. The first modern Olympiad was organized by Pierre de Coubertin, the founder of the modern Olympic movement. In 1894, in the first edition of the Olympic Review, he wrote:

> Why did I restore the Olympic Games? To ennoble and strengthen sports, to ensure their independence and thus to enable them to better fulfill the educational role incumbent upon them in the modern world; for the glorification of the individual athletes, whose muscular activity is necessary for the community and whose prowess is necessary for maintenance of the general spirit of competition. (Sport Administration Manual, 2001, p. 22)

Sports and their function have been viewed as an integral part of permanent education; the Greeks advocated the adequate development of both body and mind, where a well-rounded individual had to work towards excellence in both arenas: athletics and academics (Crowley, 2006). College athletics have been part of university life in the US since the 18th century (Falla, 1981; Zimbalist, 1999). With the birth of the National Collegiate Athletic Association (NCAA) in 1906, a uniquely American endeavor of intercollegiate athletics evolved, seeking to enable athletically gifted students to compete fairly and safely within the environment of higher education (Crowley, 2006).

The experience of student-athletes varies from school to school and individual to individual. From their admission into college, with free tuition, room and board, to their special curricula, tutoring, and living conditions on campus, there is no question that student-athletes are treated differently (Zimbalist, 1999). The term itself indicates that they are not normal students (Crowley, 2006; Ridpath, 2002; Zimbalist, 1999). Zimbalist explained that “if student-athletes

were normal students, then either the term would not be necessary or it would be joined by other terms like student-musician, student-artist, or student-engineer" (p. 37).

Potential benefits for student-athletes include: the possibility of earning a college degree; free tuition, room and board; free special tutoring; privileged living conditions while in college; prestige; and professional opportunities (Figler & Figler, 1984; Zimbalist, 1999). However, the price student-athletes have to pay for being special can easily be overlooked. They constantly have to balance their athletic, academic, and social roles, distinguishing them from the normal student body (Gaston, 2003; Lorenzen & Lucas, 2003; Sedlacek & Adams-Gaston, 1992).

The pressures resulting from their dual career can easily be overwhelming for two primary reasons: (1) Varsity sports, particularly baseball and basketball, require students to accommodate heavy practice and travel schedules, national competition, pre- and post practice needs, mandatory meetings, rehabilitation, and treatment in case of injury; and (2) School requires student-athletes to take a full class schedule, including mandatory study hall, maintain a minimum grade point average in order to be eligible to participate, and make overall progress toward their degrees (Gaston, 2003; Lorenzen & Lucas, 2003; Ridpath, 2002; Simons, Van Rheenen, & Covington, 1999).

All of these demands consume the majority of the free time these students have, leaving little time for social interaction, library study periods or participation in other campus activities. Ferrante, Etzel, and Pinkney (1991) claimed that their visibility, time limitations, myths, coach's power, and personal attributes all affect their unique situation. Not only is the amount of free time drastically reduced, but afternoon practice can also interfere with afternoon classes or labs required for specific majors. In addition, the coach's power is not to be underestimated. Vince Lombardi, former Green Bay Packer Coach in the1960s, promoted the attitude that, "Winning

isn't everything. It's the only thing." This win-at-all-costs philosophy has become prevalent in major intercollegiate football and basketball programs (Underwood, 1984, pp. 80-81), intensifying the pressures on today's student-athlete. This pressure has led to a proliferation of unethical practices, falsified transcripts, athletes receiving credit for courses not taken, and financial/academic exploitation of athletics (Purdy, 1999; Underwood, 1984). Although some counseling programs may be available to help student-athletes cope with the additional demands their special circumstances warrant, student-athletes may elect not to seek counseling for fear that to do so might jeopardize their status as a campus "hero" (Zimbalist, 1999). Athletes may also fail to take advantage of school-provided support because they rely too much on themselves or on powerful figures (such as coaches) (Ferrante et al. 1991).

In addition, student-athletes may not take full advantage of their educational opportunities. Figler and Figler (1984) reported that athletes were not aware that choosing easy courses may reduce the potential value of their education. The privileges of their position can blind them to the fact that they may be traveling a short street with a dead end and they need something to fall back on if they do not succeed as a professional athlete. Athletes in this study felt as if they were employed and expected to "do their job" (Figler & Figler, 1984, p. xv). According to Adler and Adler (1991), student-athletes often sacrifice their social lives in order to satisfy academic and athletic responsibilities. Researchers have advocated special services to assist these young people become well-adjusted, successful athletes during their time on campus (Etzel et al., 1999; Lorenzen & Lucas, 2003).

Lorenzen & Lucas (2002) point out that when student-athletes travel to compete, they are, in essence, distance education students. Could online learning be an attractive alternative for them? Currently, research indicates that students have changed radically; today's students are no

longer the people our educational system was designed to teach. In fact, students think and process information fundamentally differently (Prensky, 2001). Prensky (2001) utilizes an analogy of native speakers and immigrants to describe the generation gap that separates today's students (the "Digital Natives") from their teachers (the "Digital Immigrants").

According to Prensky (2001), Digital Natives are used to receiving information relatively quickly. They are able to process information in parallel and multi-task. They prefer graphics *before* text. They prefer random access (like hypertext) to information. They function best when networked. They thrive on instant gratification and frequent rewards. Finally, they prefer games to "serious" work (p. 2). Prensky (2001) proposes that to bridge this generation gap, today's teachers should learn the language of the Natives, speed up instruction, and provide "random access" to information (p. 4). "Future" content is to a large extent, not surprisingly, digital and technological, which is extremely interesting to today's students (p. 4), and Prensky's (2001) personal approach is to combine education and entertainment ("edutainment"). This attempt has currently failed from both the education and entertainment perspective (p. 5).

University athletics have provided a source of entertainment to the campus community since the 18th century. This has been criticized by several authors (e.g., Falla, 1981; Ridpath, 2002; Thelin & Wiseman, 1989; Zimbalist, 1999). Thelin and Wiseman (1989) critique the dubious balance between academics and athletics and the trend from education to entertainment; others have focused on the issue of exploitation of student-athletes (Crowley, 2006; Suggs, 2003; Wyatt, 1999; Zimbalist, 1999).

Statement of the Problem

The three primary problems facing student-athletes are: 1) balancing an overwhelming dual career; 2) dealing with misconceptions and stereotypes; and 3) being at a disadvantage compared to student non-athletes because of the rigors of extensive travel.

Student-athletes, by virtue of their dual careers (being both student *and* athlete) have strenuous demands on their time and energy (Gaston, 2003; Lorenzen & Lucas, 2003; Sedlacek & Adams-Gaston, 1992). Rhatingan (1984) showed that a collegiate basketball player must typically contend, along with her/his academic pursuits, with eight away-games each spring. This heavy travel schedule resulted in student-athletes missing approximately 13 class days. Since most institutions offer approximately 75 days of instruction during the semester, these student-athletes were required to be absent from 17.3 % of their classes for the semester (Rhatingan, 1984).

The rigors of extensive travel including waiting in airports and being en route for many hours and even days, constitute one disadvantage faced by student-athletes. These effects of travel exceed those of simply missing class. Regular absences are disruptive to class flow, as well as the flow of materials a student can get from regular class attendance. In addition, the student-athlete must arrange to take missed quizzes or exams and to get class notes. Sometimes, they are likely to miss review sessions available to other students, resulting in valuable time lost and a missed opportunity for help. These circumstances require a solution to remedy or reduce their effects on student-athletes. Additionally, student-athletes are often confronted with prejudicial attitudes, stereotypes, and misconceptions by their peers, faculty, and administrators

(Etzel, Ferrante, & Pinkney, 1996; Lorenzen & Lucas, 2003). These factors may increase the psychological pressures on student-athletes.

The pressure and time commitment associated with collegiate sports may also upset the balance between healthy exercise and release attributed to sports, and tension and exhaustion (Zimbalist, 1999). The "professionalization" associated with collegiate athletics may hinder the normal benefits associated with exercise (Adler & Adler, 1985, 1991; Gaston, 2003).

The burden of travel, prejudice from the university community, and the lack of normal release mechanisms can overwhelm or otherwise be psychologically detrimental to student-athletes. These factors may affect the academic performance of student-athletes. The literature surrounding the academic performance of college athletes, particularly the rate at which student-athletes graduate and make progress toward degree completion, has been growing over the past few decades (Etzel, Ferrante, & Pinkney, 1996; Gaston, 2003; NCAA, 2006; Purdy, Eitzen, & Hufnagel, 1982; Suggs, 2003).

Of particular importance to college administrators, the media, and the NCAA is an athlete's eligibility to participate in collegiate athletics, as well as the identification of factors that predict (and relate to) academic performance (Adler & Adler, 1985, 1991; Gaston-Gayles, 2005; NCAA, 2006; Purdy, Eitzen, & Hufnagel, 1982; Snyder, 1996). Although student-athlete graduation rates have increased over the past several years, the NCAA continues to be concerned about student-athletes. Particular attention has been paid to male African-American basketball players, whose performance in the classroom environment does not match their performance on the court ("Men's basketball enhancement group," 2007). These concerns highlight the need to find a solution to help student-athletes excel in both academics and athletics.

Prior research stresses the need to accommodate the busy lifestyle of student-athletes. This includes creating an effective environment that helps maintain a balance between athletics and academics on the one side, and offering an objective solution to counterbalance possible negative attitudes and prejudices facing student-athletes on the other. Additionally, any proposed solution should help alleviate the rigors of intense travel and the effects of missed classes.

Online Education may be one solution for these problems. It has become a popular approach for higher education institutions. They are able to offer a variety of distance delivery forms, as well as new instructional tools that allow them to design and offer more distance courses and programs to a greater population of students, particularly students with special requirements: student-athletes. However, little research has been done on student-athletes and their perception of online education.

Purpose of the Study

The tension between academic pursuits and athletic commitment should be addressed. Specifically, universities should provide opportunities for student-athletes to achieve success in the classroom and in the athletic arena. Problems unique to student-athletes must be addressed; specifically more attention should be paid to the effectiveness and quality of student-athletes' learning experiences. It is important to identify student-athletes' primary lifestyle concerns, discuss their perception of online education as an instruction alternative that could address their unique needs, and use their instructional preferences to enrich their learning environment. Knowing how and why student-athletes hold certain beliefs about online education will help educators plan and develop an online course designed to meet their non-traditional needs.

This study is focused on determining the perceptions, practices, and concerns about online education among student-athletes at Virginia Polytechnic Insititute and State University (hereafter, Virginia Tech). I will seek to identify the variables that may impact the degree of student-athletes' satisfaction with online learning experiences and learning outcomes. Additionally, I will determine whether online education may provide a solution to the unique challenges they face as both students and athletes. As described previously, various stakeholders have stated that it is essential to ensure that a university or college can maintain competitive athletic programs with true scholar-athletes.

Research Questions

Based on today's student-athletes' needs and characteristics as described in the literature, this study is designed to answer the following research questions:

1. What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?
2. What are student-athletes' perceptions of the benefits and barriers of online education?
3. What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?
4. Does spending a significant amount of time away from campus make online education a better method of learning?

Significance of Research

Determining student-athletes' needs and wants could help to promote high quality online course development, tailored specifically to student-athletes, as well as increase the likelihood of a positive online learning experience. Determining the variables that may impact the degree of learning satisfaction could influence online course instructional design in the future.

There is an abundance of literature relating to student-athletes in higher education, specifically focusing on NCAA admission and eligibility concerns (Adler & Adler, 1985, 1991; Etzel et al., 1996; Suggs, 2003). However, there is a dearth of information examining student-athletes' perceptions of online education. Future research in this area is required to provide the ideal instructional approach to enrich student-athletes' learning. Students on intercollegiate teams should participate fully in collegiate life, making it crucial to create new programs of support and assistance for student-athletes, as well as to take full advantage of those already in place (Clark & Parette, 2002; Etzel et al., 1991; Lorenzen & Lucas, 2003). In light of the rapid expansion of Internet-based technologies and students' computer literacy (Prensky, 2001), online learning has become attractive popular topic in education (Anderson, 2005).

According to Oblinger and Oblinger (2005), students have grown up with technology, and today's college students can be categorized as the "Net Generation" (p. 15) characterized by being digitally literate (being comfortable using technology), connected (constantly being on), immediate (multitasking quickly, sometimes simultaneously), experimental (prefer learning by doing rather by being told what to do), social (gravitating toward activities that promote social interaction), team-oriented (students help each other), structured (are achievement oriented; want parameters, rules, priorities, and procedures), engaged and experienced (oriented toward inductive discovery), and visual and kinesthetic (are more comfortable in image-rich environments).

This study will allow students and athletic department administrators to learn more about the factors related to an increase in student-athletes' academic motivation. It will also inform the people in higher education (e.g., university presidents) who insist that their athletic department be viewed as one that values graduation and academic success (Gaston-Gayles, 2005). Recent research has focused attention on becoming a *whole student and complete athlete*, not one or the other (Clark & Parette, 2002). The results of this study will assist student-athletes across the academic finish line while juggling responsibilities to two masters, athletics and academics (Thelin & Wiseman, 1989).

Limitations

The study is limited by the following:

- The study only includes student-athletes at a single university (Virginia Tech).
- Participants are male and female undergraduate student-athletes between the ages 18 and 25.
- The study will be limited to the number of student-athletes who volunteer to participate in this study with no incentive other than the feedback provided to them.
- Compliance of the participants with the ability to answer all questions with honesty and without bias.
- Compliance of the participants to accurately record their computer competency and experiences.
- The study is limited to student-athletes who are enrolled when the survey is administered, i.e., the 2007/2008 academic year.

- The survey will only be conducted once, and no longitudinal data will be provided.

Definition of Terms

- *Academic Motivation*. A behavioral force energized by student-athletes towards excelling in academics tasks and the academic environment (Willis, 2005).
- *Atlantic Coast Conference*. (ACC). A collegiate athletic league in the United States, founded in 1953, and including twelve member universities (ACC, 2007).
- *Distance/Online Education*. An institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors (Simonson, 2003).
- *NCAA*. The National Collegiate Athletic Association. An association that organizes the athletic programs of many colleges and universities in the United States (Crowley, 2006).
- *Non-revenue Sports*. Sports that typically generate little or no revenue, such as volleyball, track and field, and tennis (Purdy, 1985).
- *Revenue Sports*. Team sports, primarily football and men's basketball, which can generate revenue (Purdy, 1985).
- *Student-athlete*. A student-athlete is a student who was recruited to participate in an intercollegiate athletics program (NCAA, 2006a).
- *Traditional/Classroom Course*. Face-to-face classroom environment, real-time (synchronous) communication between the instructor and student (Hillstock, 2005).

CHAPTER 2

Review of Literature

College athletics is one of the oldest traditions in higher education, with thousands of students participating in intercollegiate varsity sports every year (Crowley, 2006; Lorenzen & Lucas, 2003). In October 1905, President Theodore Roosevelt responded to public outcry concerning the increasing number of serious injuries and deaths in college sports, with the simple message that the games should be either reformed or abolished (Crowley, 2006). Six months later, the National Collegiate Athletic Association (NCAA) was born. The NCAA is an association that has served as steward for the uniquely American enterprise of intercollegiate athletics. It celebrated its 100th anniversary in 2006. Although it has been fraught with countless problems over the last century, the overall mission of the Association has remained constant: to make certain that athletically gifted students are able to compete fairly and safely within the environment of higher education (Crowley, 2006).

Student-athletes represent a special portion of college students who have high demands on their energy and time, as well as possess unique needs that set them apart from the rest of the student body (Gaston, 2003; Lorenzen & Lucas, 2003; Sedlacek & Adams-Gaston, 1992). They are constantly placed in the precarious position of having to balance their athletic, academic, and social roles (Adler & Adler, 1991). Many sports, such as baseball and basketball require students to accommodate heavy practice and travel schedules (often including more than 20 away games in a single season), national competition, pre-and post-practice commitments, rehabilitation, and treatment in case of injury. These students must also sustain a full class schedule complete with mandatory study hall, maintain a minimum grade point average in order to participate, and make

overall progress toward their degrees (Gaston, 2003; Lorenzen & Lucas, 2003, Ridpath, 2002; Simons, Van Rheenen, & Covington, 1999). All of these demands consume most of the free time these students have, leaving little time for social interaction, library study periods, and participation in other campus activities.

A student-athlete who desires to pursue a challenging degree program or a career in athletics can easily become overwhelmed by athletic demands. According to Gaston (2003), less emphasis, time, and energy is placed on academic-related tasks. Predicting the academic performance of college athletes has been an increasing focus of study in recent decades (Etzel et al., 1996; Gaston, 2003; NCAA, 2006a; Purdy et al., 1982; Suggs, 2003). The rate at which student-athletes graduate and make progress toward degree completion, along with identifying factors that predict and relate academic performance, have been topics of interest to college administrators, the media, and the NCAA (Adler & Adler, 1985, 1991; Gaston-Gayles, 2005; NCAA, 2006a; Purdy et al., 1982; Snyder, 1996).

Maintaining the value and integrity of intercollegiate athletics as an integral part of the academic mission led the NCAA to undergo academic reform in the mid-1980s (History of Academic Reform, 2007). The NCAA established initial-eligibility standards with emphasis on the combination of Grade Point Average (GPA), a set of core courses, and results from standardized testing. Introduction of these requirements has been largely successful, with the result that graduation rates of student-athletes have risen faster than those for the rest of the student body. For example, the graduation rate report published by the NCAA indicated that student-athletes reached a graduation rate of 58 percent, compared to 56 percent for the non-athlete population ("NCAA Student-athletes graduation rates," remain steady for third consecutive year, 2001). The report also revealed that the percentage of Division I men's

basketball players graduating dropped from 42 percent in the 1993 cohort to 40 percent in the 1994 group. Specifically, Caucasian basketball players had a graduation rate of 52 percent, while African-American basketball players graduated at a rate of 35 percent ("NCAA Student-athletes graduation rates," 2001). These results highlight the NCAA's continuing concerns about at-risk student-athletes, such as male African-American basketball players.

According to the current director of the NCAA, Myles Brand, it is essential that the causes of this disparity are evaluated and meaningful strategies are developed to improve academic performance, insuring that male basketball players are as successful in the classroom environment as they are on the court ("Men's basketball," 2007). How can colleges and universities maintain competitive athletic programs while ensuring that the athletes are also "competitive" students?

The Student-Athlete

Background

The term *student-athlete* was invented in the 1950s when the possibility arose that college football players could be classified as institutional employees by the courts and other state agencies (Crowley, 2006). The expression was embedded in the NCAA rules as a mandated substitute for such words as "players" and "athletes". Yet, words often do not hold onto their original meanings over time. The combination of *student* and *athlete* has been viewed as an oxymoron; critics view its continued use by the NCAA and its members with a cynical eye (Crowley, 2006; Ridpath, 2002).

However, on the college campuses and within the NCAA, the student-athlete label is not generally understood as a way around the employee designation; rather, it simply has a practical application to help protect the indispensable link between athletics and education. Several cases

have been cited where this tie has been loosened to the point at which exploitation better describes the relationship between the terms *student* **and** *athlete* (Crowley, 2006; Suggs, 2003; Wyatt, 1999).

Depending on the goals and motivations of the institution, participating in college sports can be good or bad for the participants. Collegiate athletics programs provide opportunities for growth and development, fuel school spirit and community involvement, and open doors for students who otherwise would not have had a chance to attend college (Briggs, 1996; Wyatt, 1999). Regrettably, higher education institutions have also recruited, trained, and exploited students for their athletic ability, casting them off when their eligibility ends. Coaches and administrators have often looked the other way when student-athletes began to fail academically (Wyatt, 1999). Even though academic services are offered to these young men and women, college administrators did not stress and reinforce academic success for those students as much as much as they have stressed athletic success. Evidently, institutions have been too eager for more wins, publicity, and the financial benefits that often follow successful university athletic programs (Suggs, 1999, 2003; Wyatt, 1999).

Overemphasis on athletics.

Collegiate athletics have become a massively commercialized industry, resting upon activities that can be irrelevant and even harmful to education. If athletic programs have shown less respect for fun and fair play and have become dehumanizing, the reason lies, according to Zimbalist (1999), in the fact that sports today are organized around the needs of frustrated adults, commercialization of the games, and the emphasis upon revenue and winning, rather than around

the values of athletics to collegiate participants (Crowley, 2006; Ridpath, 2002; Zimbalist, 1999). Zimbalist (1999) stated,

> Of course, athletic departments need money to operate and provide good athletic opportunities for student-athletes. But our desire to generate these needed revenues has gone wildly out of control, creating a financial and commercial 'arms race' among schools that creates a never ending upward spiraling need for more revenues in order to beat the other guys. (p. 90)

Another professor aggravated the topic during the 1923 Convention by stating,

> In practically all of the great colleges and universities … there are being built up great intercollegiate machines, great athletic systems, commercialized and professionalized in spirit, that are fast assuming the proportions of stupendous Juggernauts …which are threatening to crack every bone in our academic bodies, and to crush out of our scholastic veins every drop of the blood of idealism and inspiration. (Crowley, 2006, p. 65)

Overemphasis on athletics has resulted in an unavoidable conflict between athletic success and academic integrity at institutions that sponsor intercollegiate athletics. Former NCAA employee, Kay Hawes, has written that the Association's "father was football and its mother was higher education." This was, she noted, an "almost unintentional union," brought about in part by the proclivity of students to play games (Crowley, 2006, p. 42).

"Student comes first".

The former NCAA college - and American National Basketball Association (NBA) basketball player, Magic Johnson, stressed the priority of being student first:

> "We always hear the term student-athlete. Well, 'student' always comes first, and it should. Very few high school athletes go on to become college athletes, and even fewer become professional athletes. The odds against it are tremendous. But far more high school students can become college students, and a college degree is the key that unlocks the door to your future, whatever you want it to be. Stay in school, but more important, learn while you're in school." (Lapchick & Malekoff, 1987, p. xvii)

Inspired by a true-life story, “Coach Carter” portrayed a controversial high school basketball coach, who received high praise and much criticism when he made national news in 1999 for benching his entire unconquered basketball team for poor academic performance. “Student comes first” was his great message, because while students may be good at sports now, achievement and academics will determine their future (Carter, 2005).

The Dual Career

Collegiate student-athletes possess a dual career: while competing in collegiate athletics, they are attending classes in order to potentially attain a college degree. First, as *students,* they are confronted with academic tasks in which every student must participate, including attending classes and labs, studying as required, and passing exams. These requirements are in themselves time-consuming. It can take five or more years of classroom work to attain a college degree. For student-athletes, however, completion of general classwork requires time that that may not be available due to their extensive athletic commitments. Non-completion of these academic tasks can result in personal distress, threat to psychological well-being, and at worst, jeopardize the student-athlete’s eligibility to participate, which may also have a considerable impact upon future occupational and career prospects (Etzel et al.,1996; NCAA, 2006a; Purdy et al., 1982; Sellers, 1992).

It has been observed that many student-athletes were often admitted to universities based solely upon their athletic prowess and not their academic aptitude; many were not sufficiently prepared upon graduation from high school to meet the academic challenges of college (Naughton, 1997; Thamel & Wilson, 2005). Thamel and Wilson (2005) reported that athletes who graduated from a $399 diploma high-school acknowledged that they learned little in school,

but were grateful that it enabled them to qualify for college scholarships. This kind of high-school offered the opportunity to earn a diploma in four to six weeks with open-book exams, no classes, and no timed tests. Recent research indicates that many student-athletes in general, and basketball and football players in particular, are not as well prepared as their peers to operate successfully in the classroom (Purdy et al., 1982; Sellers, 1992). If student-athletes are not able to meet these academic challenges, their lives after their collegiate athletic career may be negatively affected.

Second, as *athletes,* student-athletes are players and performers. Every week they compete in arenas where their efforts are highly praised and harshly criticized (Etzel et al., 1996). In the past, these performers reported that they invested a great deal of time in athletic-related activities, often more than 30 hours per week. This commitment is nearly as much time as some students would invest in a full-time job. Currently, NCAA regulations officially limit practice time to no more than four hours per day and 20 hours per week (NCAA, 2006a). Yet, depending on the particular sport and the competitive level of their school's program, college athletes frequently invest in excess of 20 hours per week in structured (e.g., conditioning, "voluntary" team meetings and workouts, care of minor physical problems, and rehabilitation), as well as other informal sport-related activities (e.g., mental preparation for competitions, meetings with coaches, interaction with the media, and community service). This workload may explain how such an involvement level can lead to a state of physical and mental exhaustion, repeated injuries and illnesses, and result in limited energy and time to devote to other areas of interest (Etzel et al., 1996).

The Freshman Student

The first year of college is a difficult one for many students in that it is the first time they are away from home and their parents. Life can change suddenly for freshmen in terms of having more freedom, making new types of decisions and choices, and dealing with a confusing campus environment. The first-year student-athlete has to deal with this novel experience as well. In addition, as a collegiate athlete, s/he has to become familiar with NCAA regulations, game and practice schedules, and cope with the stress that accompanies life as a student-athlete (Lorenzen & Lucas, 2003). Furthermore, if athletes compete in fall sports, they must be on campus several weeks earlier than the normal student body for sports practice. Athletic time commitments, such as mandatory study hall and formal and informal athletic meetings, frequently prevent the athlete from attending normal support programs that are designed to help first-year students. As a consequence, first-year student-athletes can be considered one of the highest needs groups of the entire student population (Lorenzen & Lucas, 2003).

A long-standing doctrine in intercollegiate athletics was that freshmen simply were not eligible for intercollegiate competition, except in time of war (Crowley, 2006). The first year was for adjusting to college life and continuing the process of mental, emotional, and physical maturation. Suggs (1999a) explained that freshmen ineligibility may help players focus on their studies before they get caught up in the hoopla over college hoops. A men's basketball coach describes players as being fairly immature when they get there, and states that they need a year to adjust to academic rigors and find out that they have a lot of work to do to become eligible for athletic participation (Suggs, 1999a). Regardless, by the mid-1960s, increasing numbers of people concluded that times had changed, freshmen were ready to play, and institutions were prepared to play them. At the 1967 Convention, Western Athletic Conference Commissioner

Paul Brechler argued that, because of higher academic standards, students (athletes included) were now better able to do university work. Travel took less time than it used to: "Athletics today don't take any more [of it] than other campus activities" (Crowley, 2006, p. 92). One year later a freshman-eligibility proposal passed for all sports except football and basketball, which followed four years later.

Misconceptions/ Prejudice/ Stereotyping

Some critics may oppose special consideration for student-athletes because they believe that demands of university athletics do not dramatically differ from experiences of students in general who, in turn, commit an equal number of hours to part-time jobs or other extracurricular pursuits. Hood, Craig, and Ferguson (1992) examined the effect of part-time employment among university students and found no significant relationship between the number of hours worked per week and academic performance. The researchers observed that students who worked as many as four hours per weekday achieved GPAs equivalent to the general student body. These findings suggest that time demands alone may not be responsible for the academic failures experienced by many college athletes. Additionally, other factors, such as fatigue or role conflict, may play an important role in the relationship between athletic participation and academic performance. Adler and Adler (1985) suggest that fatigue and restricted time for studying causes many athletes to give up and cease caring about their academic work. Thus, rather than use the little free time they had to catch up on their studies, student-athletes usually chose to spend it socializing or sleeping.

Personnel in higher education mistakenly assume that student-athletes' needs are met because of their access to funding streams that is unavailable to typical students, they have

preferential treatment in class scheduling, and have support from athletic supporters in the community. However, the opposite may be true, and educational and life skill development needs may have been neglected for student-athletes (Clark & Parette, 2002). For example, Engstrom, Sedlacek, and McEwen (1995) found that faculty held prejudicial attitudes toward student-athletes, and perceived more favorably students who were not involved with athletics, not being admitted to college with lower SATs, not driving an expensive car, or not being mentioned in the campus paper. Student-athletes' academic abilities were regarded less positively than those of non-athlete students, and faculty members expressed more disdain and anger toward situations in which privileges or services were granted to student-athletes. The aforementioned finding provides evidence about the prejudicial attitude held toward student-athletes by faculty (Engstrom & Sedlacek, 1991). Engstrom and Sedlacek (1991) provided evidence that student-athletes tend to be subjected to prejudice and discrimination similar to that experienced by minorities.

College athletes are typically characterized and treated as a homogeneous group of *athlete-students* or *dumb jocks*, a group that is over-privileged, spoiled, pampered, lazy, and out of control, one that already receives too much special treatment and whose primary motivation to attend school is to participate in sports (Etzel et al., 1996; Lorenzen & Lucas, 2003). In fact, the *dumb jock* stereotype of athletes is widespread in many colleges and universities, and makes it difficult for them to be taken seriously by their peers, faculty, and administrators. Sellers (1992) revealed that many people in the campus community believe student-athletes are both socially inept and do not do well in the classroom. As a consequence, student-athletes deal with people who think they are stupid and do not truly belong in the classroom.

Hamilton and Trolier (1986) explained that student-athletes are highly susceptible to stereotyping because the nature of collegiate athletics often isolates them from the larger campus community. Moreover, the general campus view of the dumb athlete is internalized by many student-athletes. To make matters worse, the athlete that experiences the low opinion that others have of her/him begins to believe it is valid. Additionally, s/he also thinks it is okay to perform poorly academically because that is what everyone expects. This cycle can damage the athletes' self-esteem and their ability to succeed academically (Hamilton & Trolier, 1986). Adler and Adler (1985) reported that African-Americans perceive that professors treated them differently from the general student body after they were identified to the professors as athletes by their coaches.

On the one hand, African-Americans thought that professors would allow them greater tolerance (i.e., extra tutoring sessions, relaxed deadlines, and relaxed academic standards.), especially during freshman year in courses taught by sympathetic faculty members, who tried to give extra attention or assistance. Additionally, this differential treatment served to reinforce the student-athletes' perception that they were athletes more than students and, therefore, it became easier for them to rationalize, procrastinate, or even become uninterested in academics because of the *content* of their classes (Adler & Adler, 1985). However, Adler and Adler (1985) state that athletes also encountered a number of less sympathetic professors who, they thought, stereotyped them as dumb jocks and cocky athletes.

Challenges and Barriers Unique to Student-Athletes

College athletes are noted by many researchers to be a unique population of young adults who lead stressful lives affected by the demands, lifestyles, and normal developmental

challenges that every college student faces (Adler & Adler, 1991; Etzel et al., 1996; Gaston, 2003; Lorenzen & Lucas, 2003). Such unique demands require special services to help student-athletes respond appropriately and to become well-adjusted, successful adults. Etzel and colleagues (1996) identified these special services as the following: (a) adjustment to competing demands, (b) response to negative stereotypes, (c) need for unique support services, and (d) coping with learning disabilities. Of particular importance is the shift of higher education personnel toward perceiving that intercollegiate athletics must assist this special population to become whole students and complete athletes—not one or the other (Clark & Parette, 2002). That is, the athlete has to been considered as an individual with changing needs and skills, rather than exclusively as an athletic participant.

Outlook

The intercollegiate student-athlete has made great changes and progress towards becoming a whole student and complete athlete (Clark & Parette, 2002). Intercollegiate athletics has focused on the creation of stronger academic and personal support services for student-athletes. For example, the CHAMPS Life Skills Program highlights many of the developmental needs of college student-athletes. The program is designed to provide student-athletes with education and experiences that optimize their collegiate experiences, facilitates successful transitions to professional careers, and supports students' meaningful contributions to their communities (NCAA, 1999).

Today, an increasing number of professionals are trying to better understand the experiences and needs of college student-athletes and are working to provide holistic support for their efforts during their busy tenure on campus (Clark & Parette, 2002; Etzel et al., 1996).

Nevertheless, critical perceptual biases have recurrently hindered efforts to effectively provide comprehensive services to this special population. Yet, special services will almost certainly have to be extended to the student-athlete. People need to realize that a time barrier exists, which limits student-athletes' time to take advantage of campus services and opportunities (e.g., going to the library) (Clark & Parette, 2002; Lorenzen & Lucas, 2003). Etzel and colleagues (1996) explained the critical perceptual biases that hinder efforts to effectively provide comprehensive helping services to this special population. These biases have resulted in a failure to recognize the fundamental importance of respecting student-athletes' developmental needs (Clark & Parette, 2002).

Accordingly, Etzel and colleagues (1996) believed that student-athletes comprise one of the most diverse groups of people on college campuses today, particularly with regard to factors such as personal history, academic preparedness, life goals and expectations, physical and psychological skills, and developmental readiness. Consequently, to effectively reach out to them as a group, factors related to their heterogeneity should never be underestimated and overlooked.

Relatively little information currently exists regarding approaches for assisting student-athletes with online environment opportunities. Considering Prensky's view of the *Digital Native* image (Prensky, 2001), Oblinger and Oblinger's statement about the Net Generation (2005), and the rapid expansion of Internet-based technologies (Anderson, 2005), it is apparent that more research about student-athletes' perceptions toward online learning is required.

The National Collegiate Athletic Association

In 2006, the National Collegiate Athletic Association (NCAA), an association of more than 1,200 institutions, conferences, organizations and individuals that organizes the athletic

programs of many colleges and universities in the United States, looked back on one century of history (Crowley, 2006). The purpose of this powerful endeavor was "to initiate, stimulate, and improve intercollegiate athletics programs for student-athletes and to promote and develop educational leadership, physical fitness, athletics excellence, and athletics participation as a recreational pursuit in the intercollegiate athletics program" (NCAA, 2006a, p. 1).

Brief History of Intercollegiate Athletics and NCAA

Athletics in college have provided entertainment for the wider university community since the 18th century as part of the curriculum at the Rugby School of England (Falla, 1981; Ridpath, 2002; Zimbalist, 1999). Athletic competition at colleges in the United States can be traced back to the football and rugby games between Ivy League schools in the 1820s and Harvard and Yale regattas as early as 1852 (Crowley, 2006; Falla, 1981; Zimbalist, 1999).

Competitions with other universities were known among the great British universities, which also served as the initial model for American higher education. In turn, those universities have been anchored in the traditions of classical education based on the ancient Greek concept of the proper balance of body and mind as one entity (Crowley, 2006). In Greek philosophy, education sought to adequately develop both the mind and body. The British universities held similar views which they passed on to their institutional posterity in America. This meant that a well-rounded individual was required to work towards excellence in both scholarship and athletics (Crowley, 2006). A professor at the Third Annual Convention of the Intercollegiate Athletic Association of the United States (IAAUS) stated that "in the Palestra, the Gymnasium, the Greek youth was taught to make his body a perfect habitation for his mind". He claimed for American colleges and universities "that the body deserves the same compulsory training at the

hands of educators as does the mind" (Crowley, 2006, p. 42). The healthy-mind-in-a-healthy-body-claim is often referred to as *Mens sana in corpore sano,* a famous Latin quotation derived from Satire X of the Roman poet Juvenal.

A public outcry arose to regulate intercollegiate athletics because of perceptions that football had reached an unacceptable level of violent play. This led to the initial meeting in 1906 and created the Intercollegiate Athletic Association of the United States (IAAUS), the forerunner of the NCAA (Crowley, 2006; Falla, 1981; Zimbalist, 1999). This association officially became known as the National Collegiate Athletic Association (NCAA) in 1910. At the first meeting, most of the concerns with college athletics focused on excessive violence, however, questions regarding the relationship of academics and athletics received almost as much attention (Crowley, 2006; Ridpath, 2002). According to the first constitution, the athletic activities of American colleges and universities were to be "maintained on an ethical plane in keeping with the dignity and high purpose of education" (Crowley, 2006, p. 55). The founders expected that a high standard of personal honor, eligibility and fair play would be preserved and any abuses remedied.

At the 1908 Convention, a professor noted that "an athletic spirit throughout the whole student body, a spirit that thrives on generous, wholesome, honest, glorious rivalry is secured." He maintained that this can happen only if the direction of campus athletics is vested in the faculty (Crowley, 2006, p. 56). For several years, the NCAA was a rules-making body and discussion group. The first NCAA national championship, the National Collegiate Track and Field Championships, took place in 1921. Gradually, more rules committees were formed and more championships were held (Crowley, 2006).

The growth in membership and championships, as well as the complexity of emerging problems, made a full-time professional leadership necessary whereupon Walter Byers, who previously had served as part-time executive assistant, was named executive director in 1951. Through Byers' vision, the NCAA evolved and an explosion of interest in campus athletes in the US, higher education in general, and the tie between the two prospered. In 1973, the Association's membership was divided into three legislative and competitive divisions and five years later, Division I members voted to create subdivisions I-A and I-AA for football (Crowley, 2006).

History of Academic Eligibility Standards

Hawes was correct in observing that the union of football (father) and higher education (mother) was "almost unintentional" and no one set out to be a matchmaker (Crowley, 2006, p. 43). The NCAA's "parents" had a difficult relationship from the beginning, making it necessary to implement reforms in order to make the union work. Since its beginning, intercollegiate athletics, and in particular its overemphasis and high value in higher education, have been placed under intense scrutiny. Since a student-athlete who does not remain academically eligible and does not make satisfactory progress toward a degree would be prohibited from competition (NCAA, 2006a), students, coaches, boosters (representatives of athletic interests) and administrators have tried, and often succeeded in, outwitting the system by criminal or illicit activity such as academic fraud and recruiting violations (Crowley, 2006; Falla, 1981). Headlines such as, *"Poor Grades Aside, Top Athletes Get to College on $399 Diploma"* (Thamel & Wilson, 2005), "Former Coach Indicted on Fraud Charges for Providing Phony Academic Credits to Basketball Players" (Suggs, 2005), and "*California State University, Northridge*

Placed on Probation for Violations in Men's Basketball" (NCAA, 2004), verify that universities, administrators, and student-athletes often placed more value on athletics rather than academics.

Proposition 48.

In 1983, the NCAA passed Proposition 48 which mandated that student-athletes reach certain academic eligibility requirements in order to compete for Division I colleges. The requirements consisted of passing a specific number of college preparatory classes, achieving a certain Grade Point Average (GPA) in those college preparatory classes, and obtaining a corresponding ACT or SAT correlated on a sliding scale to a specific GPA (NCAA, 2006a). These standards were enacted to increase the chances for a student-athlete to graduate and to constrain potential academic abuses (Crowley, 2006).

These initial-eligibility standards have been largely successful in that the overall graduation rates of student-athletes have risen faster than those for the traditional student body and the graduation rate for black male basketball players in Division I has increased over their counterparts in the student body. Specifically, the 2006 NCAA annual graduation-rate report found that 77 percent of Division I athletes were graduating within six years ("Graduation Success Rates [GSR]," 2006). In 2005, the association started using its own formula, called the Graduation Success Rate, rather than the previously used U.S. Department of Education's numbers. Unlike the Education Department's calculation, the NCAA's rate accounts for transfer students, making athletes' graduation rates look better. However, Division I men's basketball, baseball, and football players continued to have the lowest graduation rates with just 59 % of Division I men's basketball players graduating within six years, while 65 % of baseball and football players did (GSR, 2006; Wolverton, 2006).

Myles Brand, director of the NCAA, has adopted a philosophical shift at the NCAA trying to convince the public through public-service announcements that the association is in the business of educating students, who just happen to be elite athletes (Suggs, 2003). Therefore, the NCAA is creating new academic guidelines for athletes and teams, including tougher standards for making progress toward a degree, as well as incentives and disincentives for teams based on how their players perform in the classroom (NCAA, 2006a). New initial-eligibility standards were adopted in 2002 and required high-school students to successfully complete 14 core courses in English, history, sciences and mathematics with at least a 2.0 grade-point average. That figure will rise to 16 core courses for students entering college in Fall 2008 ("NCAA Backgrounder," 2007). Once in college, student-athletes must make steady progress toward earning their degree.

The Graduation-Success-Rate (GSR).

With the understanding that its rates would be published annually along with the mandated federal graduation rates, this legislation was approved in 2003. The NCAA strengthened continuing-eligibility standards so that student-athletes (including junior college transfers) would have to complete 40 percent of their graduation requirements by the start of their third year, 60 percent by the fourth year and 80 percent by the fifth. This legislation- commonly referred to as the 40-60-80 rule or 'Progress Toward Degree' rule- was designed to increase retention and graduation rates of Division I student-athletes. Also, all student-athletes were required to earn a minimum of six hours towards their degree per semester (or quarter) in order to remain eligible during the next semester (History of Academic Reform, [HAR], 2007).

Academic Progress Rate (APR).

In 2004, the NCAA developed a metric that examines academic success in a more real-time (or "snapshot") basis for each team's academic success each semester by looking at the current academic progress of every student-athlete. The APR includes eligibility, retention, and graduation as factors in the rate calculation and provides a clear picture of the current academic culture in each sport. The scoring system awards two points each term to athletes on scholarship who meet academic-eligibility standards and who remain with the school. An APR score of 925 correlates to an expected graduation rate of 60 % (a perfect score is 1000). Teams that fall below 925 are subject to penalties including additional scholarship reductions, recruiting restrictions, lack of access to postseason competition, and restricted membership (HAR, 2007; NCAA, 2006a).

Overall, the NCAA is making progress. By insisting upon a certain level of academic preparation, implementing rules that mandate progress toward graduation, and penalizing universities for poor academic performance and athlete attrition, these NCAA standards have aimed to encourage coaches and student-athletes to be more concerned about academic achievement and to better prepare athletes to succeed in college. Some critics believe that NCAA stands for *N*ot *C*oncerned *A*bout *A*cademics (NCAA drops the ball, 2007); however, Myles Brand believes that graduation rates could reach 80 % if athletics programs focus on "bringing up the bottom," or "improving rates in the lowest-performing sports" (Wolverton, 2006, p. 38).

Research Student-Athlete

With new technologies emerging each day, and the growing need for more flexibility in scheduling, there appears to be an overall drive towards the development of distance learning

programs (Hillstock, 2005; Simonson, Smaldino, Albright, & Zvacek, 2006*)*. Technological advancements since the 1990s have introduced an increasing number of web-based resources into instructional practice. Nowadays, it is difficult to find a higher education course that does not employ or take advantage of technology in some way (NCES, 2003; Zhang, Zhao, Zhou, & Nunamaker, 2004). However, relatively few studies have examined the relationship between student-athletes and online education experiences and perceptions. Yet, many articles stress the importance of student-athletes' support services (Clark & Parette, 2002; Lorenzen & Lucas, 2002; Petrie & Russell, 1995). Supporters of academic-support services argue that athletes require extra help because the schedule of practice and competition makes it difficult for them to keep up with their class work (Lorenzen & Lucas, 2002; Naughton, 1997).

Student-athletes on college campuses have many obstacles standing in the way of academic success including busy schedules, dealing with existing biases, and accessing many services on campus. In order to ensure success - as a whole student and complete athlete (Clark & Parette, 2002) - it is important to reach this group and accommodate its more unique needs (Lorenzen & Lucas, 2003). Could online learning help satisfy these requirements for student-athletes?

Purdy et al. (1982) evaluated the educational performance levels of over two thousand collegiate student-athletes over a 10-year period in one major university. Findings revealed student-athletes' academic achievements were limited in that they entered with poorer academic backgrounds, received lower grades than their non-athletic peers, and fewer of them graduated. The researchers found that student-athletes who had scholarships exhibited poor academic performance. Possible explanations for the findings were that they felt more like an employee for the university instead of a student and that they "owed" their coaches their undivided attention;

thus they had an obligation to athletics before academics. This kind of identification creates a role conflict for student-athletes, with the student role often being neglected or de-emphasized (Adler & Adler, 1991).

Graduation Rates

Academic success and the probability of student-athlete graduation has been the subject of research by intercollegiate athletic administrators and university faculty members (Adler & Adler, 1985, 1991; Petrie & Russell, 1995; Purdy et al., 1982; Snyder, 1996). During the early 1980s, a great deal of controversy arose about the perceived lack of academic preparation and graduation from college of student-athletes, particularly that of African-American athletes. The level of concern was related to students that were not graduating but should be (Lederman, 1992). Annual tracking and compilation of student-athlete graduation rates evolved as a measure of student-athlete success or failure for National Collegiate Athletic Association (NCAA) member institutions and as the best indicator of student-athlete academic success in college (Synder, 1996).

At present, incoming athletes must achieve certain grades in their high-school classes as well as certain scores on the ACT or SAT determined by the NCAA (NCAA, 2006a). Some of the academic requirements the association has introduced, including one specifying that athletes must complete 40 percent of their degree requirements by the end of their second year to remain eligible to compete, have raised concerns that players are cheating their way to eligibility, taking academic shortcuts, or clustering in easy majors (Wolverton, 2006).

Another unfortunate problem involves falsifying transcripts for student-athletes and giving them credit for courses they have never attended (Thamel & Wilson, 2005; Underwood,

1984). According to Sperber (1990), intercollegiate athletics has been scarred by abuse of academic requirements for athletic eligibility almost since its beginning. The conflict between athletic success and academic performance has had a long and sordid history (Sperber, 1990). The need for institutional accountability is important in order for the academic affairs of student-athletes to be maintained at an acceptable level.

Academic fraud in colleges and universities denied some individuals the chance to be successful in college, or admitted many student-athletes who were simply not prepared or skilled enough to go to college. Studies done over the years concluded that athletes are unprepared for and uninterested in academics and come to college primarily to advance their athletic careers rather than their future vocational careers (Adler & Adler, 1985; Purdy et al., 1982). Most are highly motivated to succeed in the athletic domain, having been selected to participate in intercollegiate athletics because of their proven ability and desire to succeed. However, many of the most visible student-athletes seem to lack such motivation in the classroom (Adler & Adler, 1985; Hood et al., 1992; Purdy et al., 1982; Ridpath, 2002; Simons, Van Rheenen, & Covington, 1999). Therefore, they have lower grade point averages, higher attrition rates, and lower chances of graduating than traditional students (Adler & Adler, 1985; Ridpath, 2002). Administrators and faculty members attribute the seemingly poor academic performance of men's basketball programs to a variety of factors, including the rigors of a season that spans two semesters, the poor educational backgrounds of many of the athletes, and the belief among many players that their careers will continue in the National Basketball Association (Naughton, 1996).

For many years, colleges and universities turned away from academic requirements, allowing under-prepared students, who are blessed with athletic ability, to participate in athletics while academics became a forgotten entity. Institutions have often looked the other way when

their athletes began to fail academically (Wyatt, 1999). If a prospective student-athlete is not prepared for the rigors of college level work, graduation may be an unattainable goal.

On the other hand, athletics has given a large number of student-athletes the opportunity to attend colleges and universities. These individuals otherwise might have not attended. Big-money collegiate athletics are often defended as an opportunity for minority and low-income youth to fulfill educational dreams they could not otherwise afford (Briggs, 1996).

Previous Research on Graduation Rates

According to NCAA research, graduation rates for all Division I student-athletes have increased dramatically since the academic reform movement of the 1980s, specifically the approval of the increased national initial athletic eligibility standard (Proposition 48) and other academic services (student-athlete academic support services). The 1996 annual report by the NCAA found that student-athletes graduated at about the same rate as their peers (58 %). The graduation rate for all athletes has increased by six percentage points since Proposition 48 went into effect (Naughton, 1996). The greatest increases were among black female athletes, whose rate improved from 44 to 58 percent, black female basketball players (from 47 % to 59 %), among black male athletes (from 34 % to 43 %) and black Division I-A football players (from 35 % to 46 %) (Naughton, 1996).

During the past several years, student-athletes were completing their bachelor's degrees at rates higher than the American college student population at large. The most recent data collected by the NCAA (NCAA 2006b), using the federal calculation for graduation rates, revealed that 63 percent of NCAA Division I student-athletes who started college in 1999 graduated within six years compared to 61-percent rate of college students nationally in the same

time period. Both rates increased one percentage point from 2005. It should be noted that the federal graduation rate does not include transfer students. The NCAA's new Graduation Success Rate, however, counts transfer student-athletes in its calculation, leading to a more impressive picture of student-athlete academic success. The most recent GSR data show that 77 percent of Division I student-athletes graduated, 14 points higher than the federal rate (NCAA, 2006b).

Unfortunately, not all teams graduate at the same rate. Division I men's basketball student-athletes graduated at a federal rate of 46 percent, up from 43 percent the previous year. Their GSR was 59 percent. In addition, Division I African-American men's basketball student-athletes graduated at a federal rate of 42 percent, up from 38 percent the previous year and five points higher than the rate for African-American male students in general (GSR was 51 percent) (NCAA, 2006b).

The NCAA recently announced that 112 Division I teams will be penalized for failing to meet minimum academic performance standards (APR cutoff score of 925) ("Knight Commission Urges Presidents," 2007). The Knight Commission has been the primary change agent in college sports reform since 1989. It strives to reconnect college sports with the educational mission of American colleges and universities. On the basis of the NCAA report on Division I academic performance, unless they make significant academic progress, 45 percent of men's basketball teams, 40 percent of football teams, and a third of baseball teams could lose scholarships or be subject to other penalties beginning in the Fall of 2008 (Knight Commission, 2007).

African-Americans

Collegiate athletics has frequently been a source of embarrassment when the NCAA releases its annual data on graduation rates of varsity athletes. Especially in the so-called revenue sports (football and men's basketball) presidents join, if not lead, the predictable chorus of educators and editorials expressing outrage at the abysmal results. Wyatt (1999) reported, “We publicly deplore, for instance, statistics revealing that only 4 out of 10 basketball players graduate in 6 years or less.” The weight of the evidence suggests that African-American male athletes who participate in revenue producing sports enter college under-prepared (Purdy et al., 1982; Sellers, 1992) and are less likely to achieve academic success compared to their athlete and non-athlete peers (Adelman, 1990; Briggs, 1996; Suggs, 2003; Underwood, 1984).

The average athlete on a top college football or men's basketball team enters college in the bottom quarter of his class (Naughton, 1997). Although African-American students constitute just 6.6 per cent of the undergraduates at Division I institutions, they make up 46 percent of Division I football teams and 60 percent of Division I basketball teams. African-American students averaged a combined score of 856 on the SAT last year, and a total score of 68 on the ACT (Naughton, 1997). The minimum SAT score required to be eligible for the NCAA Division I on the sliding scale is 820 and the minimum ACT sum score is 68 (NCAA Freshman-Eligibility Standards, 2007).

The explanations for the relatively low scores of black athletes are numerous. First, admissions policies regarding athletes vary from campus to campus with some institutions applying very strict admission standards; other institutions consider athletes to be in a separate category and treat them as such. Walsh, director of research for the NCAA, stresses the fact that

this special population has been abused by the educational system, and that they are not going to score as well as a group as everybody else. Walsh argues that universities have nothing to be ashamed of in admitting athletes with below-average academic qualifications, as long as the universities work to make sure that the athletes receive an education. Toward that end, he states that most Division I institutions have hired counselors and tutors to work with their athletes (Naughton, 1997). Adler and Adler (1991) point out that African-American students who compete in the revenue-generating sport of basketball are labeled as athletes, narrowing their focus as they progress through their universities. This identification process, which typically accompanies changes in their major fields of study, could have a detrimental effect on athletes' exploration and employment fields prior to or after graduation (Snyder, 1996).

Adler and Adler (1991) found that the athletes in their study noted feelings of antagonism from their professors. This classroom dynamic indicates another facet of emotional isolation and personal development of African-American student-athletes (Snyder, 1996). Critics of college athletics feel that the pool of students who excel at academics and athletics is too small to fill their men's basketball and football rosters with players who meet typical admissions criteria. It is estimated that each year out of 1500 top-level college football recruits, there are only 300 who score above 1050 on the SAT (Sperber, 1990).

Every year since Proposition 48 took effect in 1986, African-American athletes have dominated the rosters of Division I athletics and are ineligible under the academic standards it established (Lederman, 1992). Critics believe that the NCAA's academic requirements for incoming freshman athletes are "fundamentally flawed" and unfairly discriminate against African-Americans, according to a panel convened by a private foundation. (Panel says freshman standards are 'flawed', 1995) For example, the annual survey of the effects of the NCAA's

academic standards for freshmen showed that the association's academic rules continue to sideline African-American athletes much more frequently than Caucasian athletes.

The annual survey of the effects of the NCAA's academic standards for freshmen revealed that 5.6% freshman athletes who enrolled at Division I colleges 1992 had failed to meet the requirements (Lederman, 1992). According to the 1996 annual report by the NCAA, Division I men's basketball players graduated at a rate significantly lower than that of their fellow students. The report indicates that 44 % of the male Division I basketball players who entered college in 1989 had graduated within six years, a figure that was 11 percentage points below the male average (Naughton, 1996).

Motivation

Athletic success requires an individual to work hard, be self-disciplined, exhibit perseverance and determination, be able to concentrate, and stay focused (Simons, Van Rheenen, & Covington, 1999). These qualities, if transferred to the academic domain, would appear to result in academic success as well. Variation was found among student-athletes' willingness and success in making this transfer. In general, revenue athletes seem less willing to make this transfer and show an apparent lack of academic motivation. Revenue sports bring large sums of money to Division I schools. This perceived lack of motivation is often reflected in a general disidentification with the school and reduced academic performance (Adler & Adler; 1995; Snyder, 1996).

On the other hand, female and non-revenue athletes seem more willing and able than revenue athletes to make this transfer, as demonstrated by their superior academic performance. Non-revenue sports are those that typically generate little or no revenue and need subsidies to

meet their operating budget, such as volleyball, track and field, tennis, swimming, and softball. Studies have consistently shown that female student-athletes are superior to male student-athletes and that non-revenue athletes are superior to revenue athletes in regards to high school GPAs, Scholastic Aptitude Test (SAT) scores, and college GPAs (Briggs, 1996; Purdy et al., 1982).

Gaston-Gayles (2005) examined student-athletes' academic and athletic motivation at a Division I university by predicting academic performance. The sample consisted of 236 student-athletes participating in eight team sports in the Midwest. Results revealed that female athletes appeared to be the most balanced group in the study, exhibiting more motivation for academic related tasks than athletic ones. In addition, Caucasian student-athletes exhibited higher grade point averages than minority student-athletes. On the contrary, non-Caucasian and revenue athletes proved to be the most unbalanced groups of student-athletes in terms of academic and athletic motivation. These two groups of student-athletes exhibited a higher athletic motivation score relative to their academic motivation score (Gaston-Gayles, 2005).

Specific Sport Played in College

Revenue sports typically generate money and exposure for institutions. This disparity can lead to an overemphasis on revenue sports winning games rather than individual student academic achievement. Revenue-producing sports have been associated with a decrease in a student-athlete's academic motivation and success (Suggs, 2003; Underwood, 1984) and low graduation rates (Snyder, 1996). Revenue-producing sports and programs are associated with decreased levels of student-athlete career maturity and academic accomplishment. A student-athlete's primary focus appears to become athletics instead of academics (Adler & Adler, 1985).

According to Purdy et al. (1982), student-athletes who are involved in individual and non-revenue sports were similar to the general student population, secured better grades and were more likely to graduate than those who participated in team revenue sports. In addition, their study noted that the admission of academically marginal student-athletes is primarily confined to football and men's basketball; a finding which subsequently supported by Briggs (1996). There is evidence in the literature that participating in intercollegiate athletics can have a positive effect on graduation rates, as long as the sports are *not* football and men's basketball (Briggs, 1996, p. 13).

Adelman (1990) using data from the National Longitudinal Study of the High School class of 1972, found that intercollegiate football and basketball players complete the bachelor's degree at a reasonable rate, but it takes them longer to do so than other groups, their grades are lower, and their curricula are less demanding. However, by age 32, they experienced the lowest rate of unemployment, had comparatively high incomes, and the highest rate of home ownership of all groups studied. Role engulfment (discussed later) might explain Adelman's (1990) unexpected finding that former intercollegiate football and basketball players were the least likely of all groups to work in a career field related to their academic pursuits at age 32 (Briggs, 1996).

According to the 1999 report, graduation rates for football players and for men's and women's basketball players at NCAA institutions have fallen to their lowest levels in seven years (Suggs, 1999). These numbers can be attributed to the status of those sports and the emphasis on winning games, rather than academic achievement. There can be huge pressure on institutions to win in these sports and generate revenue. Oftentimes, colleges and universities are concerned with their athlete's eligibility status because of the tremendous revenue the athletic programs

produce, particularly in football and men's basketball. In order to remain solvent, the university's athletic department must deliver a winning team in these two sports. To deliver a winning team, keeping the athletes eligible, as opposed to on track for graduation, becomes the imperative. Pressures like this persuade institutions to focus on admitting athletes, instead of students, to increase the chances of winning (Suggs, 1999).

Adler & Adler (1985) noted that a primary change in athlete's athletic involvement was rooted in the *professionalization* of the sport (p. 244). Upon entering college, freshman athletes immediately noticed its commercialization and, as a result, basketball changed from a recreation to an occupation. The occupational dimensions of the sport and their desire to perform well intensified the pressure to win.

Role detachment.

Adler and Adler (1985, 1991) observed the lives of almost 40 members of a Division I men's basketball team over a four-year period. The researchers found that most student-athletes enter colleges and universities with optimist and idealistic goals and attitudes, caring about academics and intending to graduate. Yet, graduation may not be the end result because athletic, social, and classroom experiences lead them to become detached from their previous goals of academic success and optimism.

Adler and Adler (1985) observed relationships between athletic participation and academic performance. The purpose of their study was to analyze the academic performance of college athletes at Division I programs. Their major findings demonstrated that a student-athlete's involvement in intercollegiate athletics led to academic detachment. Winning athletic programs whose emphasis was more athletically oriented undermined the student-athletes'

realization of academic goals and other aspirations. Academic detachment was a result of adjustments the student-athletes had to overcome. Detachment from academics occurred as a result of abandonment of earlier academic aspirations and expectations of the student-athletes. The detachment led to inferior academic performance and decreased motivation to excel academically. More emphasis was placed on athletic achievement as the student-athletes' role of being a student changed to becoming a successful college athlete.

Briggs (1996) examined differences in degree aspirations and accomplishments between intercollegiate football or basketball players and other non-revenue athletes and came to the same conclusion. Most student-athletes start college with the same degree ambitions of other students, but after four years of college, football and men's basketball players have a significantly lower degree performances and degree expectations than their counterparts who play other collegiate sports (Briggs, 1996). The level of degree ambition drops significantly after being enrolled in college for one year (Briggs, 1996). Data was used from the Cooperative Institutional Research program of students who were college freshmen in 1986 and responded to a follow-up survey in 1990.

Role conflict.

According to Adler and Adler (1991) roles are based on the different activities an individual would pursue when he or she followed the guidelines of a position. Student-athletes identified themselves as a student and as an athlete; however, they adhered to each role differently. Regardless of whether they identified their priority role to be athlete or student, the decisions involved in maintaining both identities lead to role conflict and role overload. Because of the dual responsibilities of the student-athlete, they often compromise when role conflict and

overload occurs. The researchers investigated how student-athletes dealt with role-conflict. Student- athletes had to focus on academic roles, athletic roles, and social roles; however, the researchers discovered role differences between students and athlete. Findings revealed that the college athlete focused on the academic role when he or she first entered college and believed that s/he has the necessary academic skills to successfully complete in college. However, relatively little value was often placed upon academic achievement unless the college athlete's primary motivation was academic success (Adler & Adler, 1985, 1991).

Besides role conflict, Adler and Adler described role domination, role abandonment and role detachment among student-athletes. Adler and Adler (1991, p. 27) defined role domination as "the process by which athletes became engulfed in their athletic role as it ascended to a position of prominence". This occurs when student-athletes place emphasis on athletics instead of academics. According to Adler and Adler (1991, p. 28), role abandonment occurs when "they [student-athletes] progressively detached themselves from their investment in other areas and let go of alternative goals or priorities'. Role detachment has been addressed earlier in this paper.

The Role of the Coach

The coaching staff, especially the head coach of any varsity team, provides the greatest impact on the academic success of any student-athlete. Coaches emphasizing the importance of academics and who are involved in the academic well-being of their student-athletes, rather than just having athletes stay eligible to compete, can have a great influence on athlete's academic success and graduation (Adler & Adler, 1985). Revenue sports and non-revenue sports have a different coach-academic-relationship. Men's basketball and football, the two most common revenue sports, carry immense pressure for coaches to win. In general, the less pressure to win,

the more focus a coach can put on the academic well-being of each student-athlete. Therefore, in non-revenue sports, coaches typically do not put as much pressure on non-revenue athletes to perform athletically, focus more on academics and are much more involved in student's life outside of athletics (Adler & Adler, 1985).

Since winning in revenue sports appears to have a larger monetary payoff, it is plausible that revenue sport athletes are forced by coaches to accept a more severe tradeoff between academic performances relative to athletic achievements. Revenue sport coaches are primarily hired and fired based on won-loss records, not for achieving high graduation rates. This pressure to succeed can detach a revenue sport coach from being involved in the academic success of his student-athletes (Sperber, 1990). A revenue sport coach is likely to be excessive in the demands that s/he places on the time of their athletes for athletic purposes at the expense of academic purposes (Purdy et al., 1982). In revenue sports, student-athletes are likely to enroll in a less difficult curriculum designed specifically for them, which could significantly reduce the educational value of their time in college, often at the insistence of their coaches (Adelman, 1990; Adler & Adler, 1985, 1991; Briggs, 1996).

According to Sperber (1990), many student-athletes are shuttled by their coaches into "professor friendly" classes and easy majors with the intention that academics will not interfere with their athletic responsibilities. If coaches are threatened with their employment, the athletic success of the team will almost always take priority over the academic success of the student-athletes. Student-athletes will often decide in favor of athletics when a conflict exists with academics to please their coach who possesses the power to decide who starts in games and who receives scholarship money (Adelman, 1990; Briggs, 1996). Because a coach possesses the power to decide which athlete will play, many student-athletes believe that they will be penalized

by their coach for choosing academic commitments over athletic ones. Therefore, athletes themselves are likely reluctant to miss practice, as it may interfere with their athletic skill development and may place them at risk of losing a starting position (Simons et al., 1999).

Adler and Adler (1985) found that incoming student-athletes in revenue sports usually feel idealistic about academics when entering college because of coaches' advertisement of academics during recruiting. However, this often changes when the pressures of athletics begin to mount. Consequently, educational and life goals with which players entered college are often discarded in exchange for the single goal of winning games by a process Adler and Adler (1991) call "role engulfment". The researchers noted that many factors contributed to this narrowing of pursuits, but found that the coach was the main influence in the process of role engulfment away from academics in order to meet high performance athletic goals.

Researchers have attempted to determine what non-academic variables might help to explain the college academic performance of student-athletes. They found that a strong support person, involvement in the community, and positive self-image positively predicted college academic performance. On the contrary, if influential role models do not care how the student-athlete performs academically, the student-athlete's academic performance will suffer (Petrie & Russell, 1995; Sedlacek & Adams-Gaston, 1992; Sellers, 1992).

In sports, discipline, responsibility, and self-control are qualities that all coaches try to instill in their student-athletes. Athletes are encouraged to play hard and to practice with great intensity in preparing their minds and bodies to compete successfully (Shuford, 1998). Indeed, a coach can be the strongest support person in the life of a college student-athlete (Petrie & Russell, 1995). Just as the term "student-athlete" has become politically correct on the

institutional level, it is now time to apply the term "educator-coach" to the people who minister to the student-athletes' various needs (Shuford, 1998).

Shuford suggests three basic reasons: (1) student-athletes' graduation has to be ensured and the coach must understand all the requirements for graduation and have a general idea of how each athlete is progressing, (2) college admission requirements must be understood, i.e., NCAA eligibility requirements, the SAT/ACT scores, and the recruiting process, and (3) coaches must be concerned with athletic eligibility. Athletes have to be eligible in order to contribute to their team's success. Coaches have to deal with state and local eligibility requirements and must inform all prospective athletes of the requirements and serve as support persons to them.

Specialized Academic Support Services

Practically all NCAA Division I institutions provide a number of advisors, tutors, and mentors to help student-athletes learn how to balance the demands of the classroom and the playing field (NCAA, 2006a). Members of the Association have the responsibility to "conduct intercollegiate athletics programs in a way designed to protect and enhance the educational well-being of athletes and to assure proper emphasis on educational objectives" (NCAA, 2006a, Article 22.2.2.2, Academic Integrity, p. 390).

Many researchers (Clark & Parette, 2002; Lorenzen & Lucas, 2003; Petrie & Russel, 1995) have suggested that student-athletes face a unique set of challenges which they are not ready to meet without assistance. They are seen as a diverse special population because of their roles on campus, their atypical lifestyles, and their special needs (Sedlacek & Adams-Gaston, 1992). The Challenging Athletes Minds for Personal Success (CHAMPS) / Life Skills program was launched by the National Collegiate Athletic Association (NCAA) in 1994. The program

was created to support the student development initiatives of its member institutions and to enhance the quality of the student- athlete experience within the university setting. The NCAA provides instructional materials and resources that support student-athletes' development in academics, athletics, personal life, career, and community service (NCAA, 1999).

Critics state that the graduation rates of athletes are inflated because of these specialized academic support services, and that many would not graduate without an inordinate amount of help (Naughton, 1997). Thomas L. Haskell, a professor at Rice University, has said that athletes are shepherded through courses and majors that athletic academic counselors know they can pass, rather than receiving an authentic education. He argued that if athletes were real students, they would not need elaborate and costly machinery to do what normal students must do as a matter of course (Naughton, 1997). Others, in turn, argue that initial eligibility standards alone do not increase graduation rates. They point to a vast array of services available only to athletes that can insure that even an academically marginal student-athlete can graduate (Sperber, 1990). George Raveling, for example, the men's basketball coach at University of Southern California once said that he thinks that "you have to work at not getting a degree if you are a student-athlete today" (Lederman, 1991).

Summary

The numbers demonstrate that graduation rates for student-athletes are on the rise; but on the other hand, much work remains to be done.

Gaston-Gayles (2005) states that there are many ways student affairs administrators can help student-athletes increase their level of academic motivation. At present, student-athletes spend a lot of their time and energy in the athletic domain. Stimulating the creation of a balance

between academics and athletics must be encouraged (Gaston-Gayles, 2005). Further, the collegiate athlete should be encouraged to take responsibility for their academic successes and failures just as they analyze a bad game by searching for the reason for poor performance. Already existing student-athlete support services, as well as the coaching staff, play an important role in helping their athletes succeed as both athletes and as students.

Research on Student-Athletes and Online Education

Not everybody on campus understands how time-consuming college athletics can be (Lorenzen & Lucas, 2003). First, heavy practices (sometimes even two sessions a day during the season, conditioning and weight training during the off-season), then mandatory study hall control every evening, formal and informal athletic meetings, and curfews restrict the student-athlete's free time. Additionally, intense travel schedules require students to be out-of-town for one or more days nearly every week during the season, making it difficult to find a balance between one's body and mind. As early as the 1920s, Frederick Allen observed that "teams which represented supposed institutions of learning went barnstorming for weeks at a time, imbibing what academic instruction they might on the sleeping car between the Yankee Stadium and Chicago or between Texas and the Tournament of Roses at Pasadena" (Crowley, 1996, p. 61).

Their dual roles and busy lifestyles distinguish them from traditional students and leave them with little free time. Lorenzen und Lucas (2003) alluded to these limitations, including preclusion of access to many services on campus including the library. The authors reported that at Michigan State University, all freshmen athletes were required to attend library instruction sessions, focusing on how to access electronic library resources. In 1996, the men's basketball

team at the University of Washington was given laptops to better enable them to complete schoolwork when traveling and was also enrolled in a course on how to use laptops. The program was considered successful and plans were made to expand it to include more of the student-athlete population (Lorenzen & Lucas, 2003). Do these results indicate that instructional technology can provide help for student-athletes?

According to Fowler (2004) and Rundle (2004), online education for athletes who are too busy to attend traditional classrooms has found its way into high schools. The private program of University of Miami Online High School (UMOHS) is a virtual school that caters to athletes and offers an academic program for $9,750 a year (Fowler, 2004). More than 400 students are enrolled at UMOHS, 65% of whom are athletes and, in particular, tennis players. Virtual high schools, says Rundle (2004), have emerged as an increasingly popular education alternative for on-the-go athletes. The director and owner of UMOHS states that a growing number of young athletes are dropping out of traditional schools in order to spend more time training and traveling to tournaments. Further, he estimates that between one quarter and one half of "high-level" tennis players are not in school. Parents contend that “if you stay in the top ranks of tennis, you can't go to school like a regular kid anymore” (Rundle, 2004). For example, a 16-year-old tennis hopeful claimed that online school gives him the flexibility he needs and although the workload is the same, he can do it anywhere. He stated that although it is nicer to ask a question face-to-face to a teacher, online education prepares him in some ways better for college because he is to required to be more independent (Rundle, 2004). Another athlete at UMOHS improved his world junior ranking from 886 to 110 within a year while attending online classes (Fowler, 2004).

Online Programs for Student-Athletes in High Schools

Online education for student-athletes has already found its way into the high school setting. The online high school Laurel Springs in Ojai, California offers an academic program to 1,800 students. A mother of a 13-year-old elite gymnast who spends eight hours a day in the gym, argued that she does not want to compromise education, but regular school was not an option (Fowler, 2004). Several states have rules that require schools to fail students if they do not meet certain attendance standards, i.e. in Arizona, teachers can fail students who miss more than seven days a year (Rundle, 2004). Critics and educators are split about the benefits of online schools; however, UMOHS was recently granted membership in the National Honor Society. In addition, UMOHS began collaboration with the University of Miami, where it expects to tap into the expertise of professors and graduate students to help with curriculum development (Rundle, 2004).

Kevin Roy, Elite's director of education, points to both benefits ("the virtual school offers endless possibilities") and costs ("you will never have that wonderful teacher who inspires you for life") of online education (Fowler, 2004). UMOHS offers pure, online classes for full-time enrollment and the option to attend an affiliated bricks-and-mortar institution with at least one online course. Each method resulted in most of the high school's alumni going on to college, many of them with a full or partial scholarship (Rundle, 2004). One student stated that the online curriculum requires a lot of self-discipline and is more challenging than the courses at the 'old' school. Some parents are skeptical and hesitant about the academic quality of online learning programs, yet teachers tutor students at UMOHS, monitor students' work, and send progress reports every three weeks via computer to students' parents (Rundle, 2004). The associate

executive director believes that distance education is an idea whose time has come; additionally, research shows it's an effective learning approach (Rundle, 2004).

Other Experiences of Online Education with Student-Athletes

Sacred Heart University has discovered online education to be an effective tool for student-athletes. Hutchison (2004) points out that it is not always possible for student-athletes to take the traditional four-year path to a college degree because certain classes conflict with team schedules, the demanding sports season often limits the number of credits a student-athlete can handle, and there is not always the option to take a condensed course on campus during summer months. This is where online learning comes into play and offers an alternative source of education to earn credits. Sacred Heart University associate athletic director, Lucy Cox, evaluates the school's athletes to determine whether online learning is appropriate for them. Cox determines whether they are self-disciplined enough to take the course. Self-discipline is important because student-athletes do not have a set class time. Cox stated, "Online courses are not an easy fix for student-athletes who may need to pick up an easy three credits. For starters, online courses require students to manage their time well enough to fulfill course requirements" (Hutchison, 2004, p. 16).

Cox emphasizes that online learning is a great option because student-athletes can do their work whenever they want, which is a perfect fit in the summer off-season. Cox claimed, "We are very careful in making sure distance-learning courses are good fits for our athletes. We are careful that they don't overload with these types of courses" (Hutchison, 2004, p. 16). Cox also added that self-motivation is crucial and thinks that probably most athletes are self-motivated and good enough at managing time to handle these alternative, vigorous courses.

Nevertheless, not all of the 750 Division I student-athletes at Sacred Heart get through online courses successfully. Cox contends that the success rate is about 90 percent and student-athletes hold a 3.0 GPA. Oftentimes, student-athletes need help getting through the semester when they are playing because they cannot be in class all the time. Online classes are a way for some athletes to make up for lost time during the school year" (Hutchison, 2004, p. 16).

As a result of their hectic lifestyle, student-athletes may struggle in college more than the general student body, and are in need of an alternative learning environment that emphasizes learner-centered activity. Lorenzen & Lucas (2002) point out that student-athletes are, in essence, distance education students every time they travel to compete. Would student-athletes be able to exercise control and effectively regulate their own learning in a flexible learning system? Is there a movement toward using online learning for student-athletes? Perhaps online classes could substitute for those missed by using streaming video of lectures? Would online education be preferred over the traditional classroom approach? Which specific media and learning attributes should be examined?

Research on Online Education

Online education, or distance learning, has passed through four to five 'generations' of technology in its history from print, audio, and video broadcasting to computer aided instruction to online learning and computer broadcasting (Simonson et al., 2006). It has become the format-of-choice for many universities and colleges anxious to provide students with the opportunity and convenience of learning outside the classroom (Allen & Seaman, 2006; Simonson et al., 2006). Peters (2007) acknowledges that the digital age has created a new relationship between teachers and learners. She states that research conducted by the London School of Economics

found that children are typically the Internet experts in the family and described this situation as a “lasting reversal of the generation gap” (p. 5).

The growing popularity and development in personal digital assistants (PDAs), PocketPCs, Smart Phones, mobile phones, personal media players, and Apple’s iPod have offered an additional online education medium (Anderson, 2005). The availability of such portable, handheld ICT (Information and Communications Technology) devices has provoked many in education to explore its implications for teaching, learning and research (Anderson, 2005). Anderson’s report stated that technologies will become cheaper, faster and increasingly common and that ever larger increases in storage, processing and communications capabilities of these devices is predicted over the coming years (Anderson, 2005).

Growth and Development of Distance Education

Distance Education has become a popular approach in higher education institutions offering a variety of distance delivery forms and new instructional tools that allow college and universities to offer more distance courses and programs to a greater population of students, especially students with special needs. A study by the U.S. Department of Education on distance education in higher education revealed that 45 % of all public four-year institutions and 39 % of all public two-year institutions offered distance education courses during the 1994-1995 academic year (Lewis, Alexander, & Farris, 1997).

Over the last decade, institutions participating in distance education have grown significantly. According to the National Center for Education Statistics (NCES), 86 % of all public four-year institutions and 88 % of all public two-year institutions offered at least 1 distance education course during the 2004-2005 academic year (NCES, 2006).

Online education, often referred to as eLearning, has been the most popular form of distance education. A recent study has found that the popularity of online education is definitely on the rise (Allen & Seaman, 2006). The Sloan Survey of Online Learning, "Making the Grade: Online Education in the United States, 2006" highlights tremendous growth in online learning in the United States. The annual study, now in its fourth year, was based on responses from 2,200 U.S. colleges and universities. It suggests that for the past several years, online enrollments have been growing substantially faster than the overall higher education student body. Higher education institutions taught nearly 3.2 million online students during the fall term of 2005, an increase of about 850,000 students and a growth rate of 35 % relative to 2004 (Allen & Seaman, 2006). The survey also revealed that 62 % of chief academic officers agree the learning outcomes in online education are now often as good as or superior to face-to-face instruction; 58 % agree that online education is critical to their institution's long-term strategy compared to 56 % in 2005. In addition, 73 % agree online education reaches students not served by face-to-face programs (Allen & Seaman, 2006).

Online learning includes synchronous instruction that enables students and instructors to participate simultaneously, and asynchronous instruction that allows an anywhere/anytime approach, at the learner's convenience, which is time-zone independent (Simonson et al., 2006). Learners appreciate online learning because of the convenience it offers to take courses from home or on a trip without the typical cost and time issues associated with travel to and from a traditional campus (Simonson et al., 2006). Distance education, at its most basic level, takes place when a teacher and student(s) are separated by physical distance and technology (i.e., voice, video, data, and print), often in concert with face-to-face communication, is used to bridge

the instructional gap. These types of programs can provide college education to those individuals that are disadvantaged by limited time, distance or physical disability (EODE, 2007).

Course Delivery Methods

While individual instructors use diverse course delivery methods, there are three common methods of communication that are currently used to provide information and course material in college and university settings (Allen & Seaman, 2006; Rodriguez et al., 1995): (1) traditional or face-to-face instruction where an instructor leads the course, no technology is used and content is delivered in writing or orally with no online-related course experience; (2) online courses which have at least 80 percent of the content delivered online and typically without any face-to-face meetings, and (3) the combination of both a professor and online instruction. Allen & Seaman (2006, p. 4) distinguish between web-facilitated instruction and a blended/hybrid course. In a web-facilitated instruction, between 1 and 29 percent of content is delivered online. These courses use web-based technology to facilitate what is essentially a face-to-face course, for example by use of a course management system (CMS) or web pages to post the syllabus and assignments. A blended/hybrid type of course blends online and face-to-face delivery. A substantial proportion of the content, 30-79 percent is delivered online, typically with the use of online discussions and some face-to-face meetings (Allen & Seaman, 2006).

Today, with new technologies emerging daily and the growing need for more flexibility in scheduling, there seems to be an overall trend towards the expansion of online or distance learning. The underlying premise of online learning is to create and widen access to education and to improve its quality, using online education techniques and associated technologies to meet

the particular requirements of individuals who are unable to participate in the traditional classroom environment (Hillstock, 2005).

Face-to-Face Instruction

In a traditional or face-to-face classroom environment, real-time (synchronous) communication between the instructor and student takes place. The instructor is typically responsible for class objectives and goals, serves as a leader, and decides on the methods of evaluation. In a traditional classroom, the instructor takes advantages of the chalkboard, overhead projector, print media, handouts, and open class discussions (Hillstock, 2005). According to Simonson and colleagues (2006, p. 230), "teachers and the textbook were the two primary sources of course content; teachers lectured and demonstrated; students listened and took notes, and then regurgitated the same information the same information back to the teachers on exams."

The advent of computer- and Internet-based technologies, however, has brought new opportunities for providing learning experiences to students. This philosophy of education has become popularly known as student-centered learning because it promotes active learning, mastery of course material, collaboration, and student control over the learning process (Simonson et al., 2006).

Distance Education

Distance education is defined "as institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (Simonson, 2003). According to the American Society for Training and Development, Distance learning (also called Distance Education), is an

> "educational situation in which the instructor and students are separated by time, location, or both. Education or training courses are delivered to remote locations via synchronous or asynchronous means of instruction, including written correspondence, text, graphics, audio- and videotape, CD-ROM, online learning, audio- and videoconferencing, interactive TV, and FAX." (Kaplan-Leiserson, 2007)

The growth in online learning has changed the emphasis in education from an instructor-centered to a learner-centered focus. In an online or distance learning environment, the instructor is viewed as the facilitator of learning by guiding the students, rather than directing (Simonson et al., 2006). Yet, this shift towards the absence of an on-site instructor expects the online learner to take greater responsibility and control of their own learning and for class management (Schunk & Zimmermann, 1998). Several researchers have argued that online students must have well-developed self-regulated and self-directed learning skills, oftentimes to a greater extent than traditional learners (Hillstock, 2005; Kinzie, 1990; Schunk & Zimmermann, 1998; Simonson et al., 2006). Self-regulated learners are motivated to efficiently control their own learning experiences. They establish a productive work environment, use resources effectively, hold positive beliefs about their abilities, are aware of factors that influence learning, and organize and rehearse information to be learned (Schunk & Zimmermann, 1998).

To date, there is no clear or verified process for determining whether face-to-face instruction, distance instruction, or a combination of the two is best (Clark, 1983; Simonson et al., 1996). Some people advocate the need for face-to-face instruction and stress the importance of seeing and being seen, and the personal nature of the teaching-learning environment. They argue that you cannot really learn a topic without being in a specific place with a select group of collaborators (Simonson et al., 1996). In the same manner, Garrison (1990) argues for the appropriate, conservative use of interactive communication technologies education, which is dependent on two-way communication. There is an increasing realization in the educational

community that simply accessing information is not sufficient. In an educational experience information must be shared, critically analyzed, and applied in order to become knowledge (p. 13). Garrison (1990) states, "Passive access to information is not sufficient; there must be active participation in the educational experience for information to become meaningful knowledge" (p. 15).

Simonson and colleagues (2006) stress that it is equally important to understand the intent of learners when planning the process for delivery since knowing the students in a class provides the instructor with an understanding of how to best approach instruction to ensure an optimal learning experience for all.

Effectiveness of Online Education

Russell (1999) has examined more than 300 papers, research reports and summaries addressing learning benefits of different media since 1920 and concluded that there is no significant difference between distance learning and traditional classroom learning. The so-called no-significant-difference phenomenon demonstrates that no significant difference can be found, regardless of the medium used for learning (Russell, 1999).

In 1983, Clark wrote that "the best current evidence is that media are *mere vehicles* that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in nutrition…only the content of the vehicle can influence achievement" (Clark, 1983, p. 445). In his article, Clark claimed that instructional media were excellent for storing educational messages and for delivering them almost anywhere. Media, however, were not responsible for a learning effect and learning was not enhanced because instruction was media-based. Instead, the content of the instruction, the involvement of the

student, and the method used to promote learning was what crucial for the learning experience (Clark, 1983).

Some critics might not have agreed with Clark's review of instructional technology in which Clark (1994) once again evaluated the research on technology used to deliver instruction and said that "it is likely that when different media treatments of the same informational content to the same students yield similar learning results the cause of the results can be found in a method which the two treatments share in common…give up your enthusiasm for the belief that media attributes cause learning" (Clark, 1994, p. 28).

Since Clark's widely distributed comments (1983, 1994), a number of researchers have tried to refute his premise but have not yet been successful. At present, there is a consensus that "media are mere vehicles" and that we should "give up (our) enthusiasm" that the delivery media for instructional content significantly influences learning (Simonson et al., 2006). However, some people have misinterpreted the "no significant differences phenomenon" and assumed that instructional technology and distance education do not promote learning. According to Simonson et al., (2006), this belief is false. They provide evidence that it is possible to learn from technology delivered instruction at any age, and that distance learning works. They conclude that distance education can be as effective as any other category of instruction and that keys to successful distance learning are in design, development, and delivery of instruction, and are not related to geography or time (p. 9).

Advantages of Online Education

The primary advantages of online learning are flexibility in time and location, a learner-centered approach, convenience, and the ability to work at any place and at one's own pace

(Zhang et al., 2004). Time for class can be distinguished as synchronous (which is similar to the on-campus, face-to-face arrangement where all members of the class are together at the same time by means of a televised class, audio conference or web-based video conference) or asynchronous ('anytime/anywhere' classes in which students can learn and complete coursework at the best and most appropriate time for them) (Simonson et al., 2006).

Some educational institutions are combining distance and on-campus students in courses. In some courses, distance students can watch on-campus class meetings live via online streaming video and even participate in real-time discussion between on and off-campus students through an online chat board (Simonson et al., 2006). Other online classrooms permit the recording of interactions and instructional events that may have already occurred (Simonson et al., 2006). This may yet be another effective option for student-athletes to make up for missed classes on account of tight travel schedules.

The asynchronous educational environment enables the learner to engage in more reflective thinking before having to answer or discuss issues, relative to a synchronous or same-time interaction. According to Simonson et al. (2006), with a face-to-face class, there may often be a sense of time urgency associated with answering student questions during class or during office hours whereas the time lags experienced in an online class may take some of the pressure off instructors and students and provide more time to prepare appropriate responses to questions (Simonson et al., 2006). Another advantage of online classes is the emphasis on written words which encourages deeper level thinking in online classes. Besides time benefits, many learners appreciate lower transportation costs by not having to commute to and from campus (Simonson et al., 2006).

Could digital education be a viable option and a better fit for people who cannot participate easily in traditional classes or who have other commitments such as family, work and participation in serious sports?

Simonson et al., 2006 (pp. 233, 234) provide insight into both the advantages and limitations of online learning compared to face-to-face instruction:

- Unless access is deliberately restricted, courses or online course materials could be available to any qualified individual in the world with a properly equipped computer and an Internet connection. Students can participate from school, home, office, or community locations.
- Asynchronous course components are available 24 hours a day, at the learner's convenience, and are time-zone independent.
- Students can work at their own pace.
- Course materials and activities available through the Web are distributable across multiple computer platforms; it makes no difference whether users are using Windows or Macintosh operation systems.
- The technology is relatively easy for students to use.
- Learning materials are available across the entire World Wide Web.
- Online course materials, once developed, are easy to update, providing students access to current information.
- The Internet can provide a student-centered learning environment, if the materials and methods are designed to take advantage of the interactivity the Internet provides.
- The Internet promotes active learning and facilitates student's intellectual involvement with the course content.

- A well-conceived online course provides a variety of learning experiences and accommodated different learning styles.
- Students become skilled at using Internet resources, a factor that may improve employment options upon graduation

Limitations of Online Education

- Online courses may emphasize the technology rather than the content (Clark, 1983, 1994).
- Well-designed Internet-based courses may be labor-intensive to develop; requiring time and personnel resources not available to many instructors (Hillstock, 2005).
- Some instructors have difficulty adjusting to the learner-centered model of instruction and do not want to convert their teacher-centered model into an online format. Some topics may not adapt well to delivery by computer.
- Copyright violations on course web pages that are not password-protected sit in plain sight for the rights holders and their attorneys.
- Online courses require students to take more responsibility for their own learning (Schunk & Zimmermann, 1998).
- Although responses to questions may be instantaneous in the conventional classroom, feedback may be delayed by hours or even days in an online learning situation.
- The support infrastructure, providing training and technical assistance to both students and instructor, is often minimal or nonexistent. Instructional design support during the conceptualization and development of a course is also frequently unavailable.
- In the online environment, users may be subjected to distractions unbeknownst to the instructor.

Misconceptions of Online Education

Hillstock (2005) highlights four misconceptions about distance education: (1) the underestimated amount of time needed to develop and prepare on the part of the faculty members, with up to 30 extra hours required to prepare for the semester; (2) the effective use of appropriate technology; (3) the various learning styles of students and the misconception on the part of the students that the class might be easier and the workload lighter because they can work at their own pace.; and (4) the misconception that online learning is a way to save money.

Faculty should choose the technology and gain a complete understanding of its strengths and weaknesses; however, they should primarily concentrate on education. Principally, the technology should be used to supplement the classroom as a means of enhancing learning. Inadequately equipped online learning systems can result in frustration, confusion, and a reduction in student interest (Zhang et al., 2004).

Students should first address the issue of how they learn most effectively and consider three characteristics: visual, auditory and kinesthetic. Visual learners learn through seeing, auditory learners learn through listening and kinesthetic learners learn through moving, doing and touching. With the addition of newer technologies, audio streaming is available to an auditory learner in web-based environments. With this in mind, students are able to determine the best ways to prepare for synchronous (i.e., chat) or asynchronous (i.e., discussion board) class discussions, quizzes, and exams. Generally, distance education is more expensive to set up and once implemented properly, administrators must carefully consider the cost of development, training, support, and how to stay current with technology. In addition, the student-teacher ratio

will be smaller than that of the traditional classroom (averaging one teacher to twenty-five students) (Hillstock, 2005).

Characteristics of Online Learners

Although online education is gaining popularity (Allen & Seaman, 2006), it is accompanied by a high attrition rate. According to Lee and Witta (2001) attrition can be directly attributed to a motivational problem. When learning takes place at a distance, student motivation becomes particularly critical because distance learning places the responsibility for learning on the student much more so than does traditional learning.

Controversy exists regarding the relationship between the student's level of comfort with using the Internet and the degree of student satisfaction with online courses. Loyd and Gressard (1984) state that, "it is becoming increasingly evident that familiarity with computers and the ability to use them effectively will be of critical importance to success in many different fields" (p. 67). In addition, online learners lacking the required technical skills are at risk of suffering from computer anxiety; however, Loyd and Gressard (1984) support the theory that increasing computer experience will decrease computer anxiety.

Stokes (2003) found a significant relationship between the student's level of experience using the World Wide Web and student satisfaction. Students who described themselves as being at ease with using the World Wide Web were more likely than less experienced users to be satisfied with the online learning environment. According to Lee & Witta (2001), engaging in an online learning process requires a certain level of comfort with computer and web technologies in order to fully participate in online instructional activities, to access instructional materials, and to interact with an instructor and peers, students need to be able to use a variety of modern

hardware and software applications. Results of a 4-interval-survey of students enrolled in an undergraduate course, Introduction to Educational technology offered through WebCT, indicated that self-efficacy for course content and online technologies increased during the semester. They found that initial self-efficacy for course content was a significant predictor ($p<0.05$) of students' satisfaction with the course; they found a considerable significant increase in student's level of self-efficacy for online technologies during the first three weeks of the semester. Common sense dictates that when students have more experience with online technologies, they feel more confident using online technologies, and their self-efficacy increases accordingly (Lee & Witta, 2001).

Alternatively, DeBourgh (1999) studied student satisfaction in a graduate nursing program taught via fully interactive, multipoint real-time video teleconferencing and reported that being at ease with the World Wide Web was not a predictor variable for satisfaction with online learning. Students who had little or no previous experience with distance learning and rated their precourse competence with technology as low were highly satisfied with the course (DeBourgh, 1999). Also, Rodriguez et al. (1995) found that comfort with computer operations and online-technology tools did not appear to be related to online course taking behavior (number of line courses taken). They state that comfort with technology does not limit who enrolls for online courses.

Stokes (2003) identified two "best" measures of student satisfaction: student willingness to take a web-based course again and their willingness to recommend an online course to a friend. He concluded that satisfaction with online learning was influenced by Internet access, increased flexibility in daily activities by taking a Web-based class, and the availability of Internet resources for class work. DeBourgh (1999) suggested that certain pedagogical

characteristics are associated with student satisfaction, including providing clear expectations about course assignments, promptly recognizing and responding to students' questions, encouraging student participation in class sessions, using a variety of instructional techniques to help students gain a better understanding of course material, establishing mechanisms for students to access the instructor outside of class sessions, and providing timely feedback and return of students' written course work. Rodriguez et al. (1995) found a negative relationship between the number of online courses taken and satisfaction.

Simonson and colleagues summarized characteristics of an effective online learner. He or she must: (2006, p. 235):

- Be comfortable with learning and interacting with others through technology.
- Have the ability to communicate effectively through writing.
- Have the presence of mind to think ideas through before responding.
- Be self-motivated and self-disciplined, and able to structure and manage time effectively.
- Be goal-oriented.
- Have the ability to conduct self-study as necessary and construct knowledge to fill in informational gaps that may occur in an online lesson.
- Be open-minded about sharing life, work, and educational experience as part of the learning process.
- Be willing to take risks and to "speak up" if a problem arises.
- Have the ability to focus and ignore distractions in one's own learning environment.

- Have a commitment to the belief that high-quality learning can take place in the absence of a traditional classroom.
- Be sufficiently flexible to accept teaching and learning in a different context and have the ability to adapt to learning successfully in an online environment.
- Have the ability to commit the amount of time the course requires.
- Be willing to interact effectively with peers and engage in group processes.

Can Online Education be Considered for Student-Athletes?

Self-motivation, self-discipline, goal-orientation, willingness to take risks, ability to concentrate, work hard, perseverance and determination are qualities required to be a successful athlete (Simons et al., 1999). An online environment might be attractive to student-athletes, considering that these young men and women on college campus have many obstacles to academic success, particularly dealing with a) an overwhelming dual career through difficult schedules, b) misconceptions and stereotypes, and c) being at a disadvantage through the rigors of extensive traveling. In general, they have difficulty accessing many services on campus, including the library, because of time and location restrictions (Lorenzen & Lucas, 2003; Wyatt, 1999).

Dealing with dual career and difficult schedules.

Rodriguez et al. (2005) surveyed 700 professional and graduate education students regarding their comfort with technology, satisfaction with those experiences, and perceived quality (given their experience with online or hybrid courses). They found that students with or without online course experience appreciated the following aspects: flexibility of study time,

study location, and less need to go to campus. Yet, both groups responded negatively to the limited face-to-face interaction (Rodriguez et al., 2005).

Dealing with bias and stereotyping.

Simonson et al. (2006, p. 45) point out that online learning courses lead to an unbiased class environment since fewer channels are available for personal judgment. They state that it is easier for an instructor (as well as for students) to be more objective about individual achievement. Vrasidas & Zembylas (2003) agree that technology influences cross-cultural online interaction by simply reflecting each individual's words, and not reflecting attributes commonly subjected to biases, stereotypes, misconceived perceptions, or misinterpretations due to someone's skin color, physical appearance, gestures, or facial expressions.

Being at a disadvantage through the rigors of extensive traveling.

As in any instructional setting, class attendance is imperative (be it in a traditional class or a distance class) and class participation always enhances learning for students. One solution is to provide a video-based class for which, when a student is unable to attend a class, the professor could record the class and send the tape (video or audio) to the learner(s) who missed class. Although no interaction is possible, at least learners do not lose out on content (Simonson et al., 2006).

Perspective on Online Education

In today's technologically oriented information dependent era, the availability of online courses will continue to increase (Allen & Seaman, 2006). Advances in computer and networking technologies provide diverse support for learning in a more personalized, flexible, portable, and on-demand environment (Zhang et al., 2004). The success that higher education

institutions experience with distance learning will depend on a greater understanding of the student perceptions. Being able to understand the needs of students, support students in online courses, and promote successful learning experiences will be critical to the success of the online learning arena (Rodriguez et al., 2005). Crowley (2006) has introduced the student-athlete's arena as a physical space and a mental place. Is there an online arena for student-athletes?

Some questions remain to be answered: How are student-athletes influenced by adopting online techniques to their unique environments? Are these alternative techniques superior to the traditional face-to-face classroom environment, which is centered on instructors who control class content and the learning process? Does online learning offer a learner-centered, self-paced learning environment that is more effective for this special population? How can instructional technology minimize the barriers that other students on campus do not have to deal with? How can pre-existing student-athlete support services be improved? Educational researchers do not have to reinvent the wheel; athletes do not need sophisticated, fancy technology, but they do need something more accommodating for their unique demands on time and energy. With online education, student-athletes may have more freedom to study whenever and wherever they want and at their own pace. This can be advantageous, but technology can create feelings of separateness and isolation (Wolcott, 1996), if it is not supported by increased interaction and if it is not embedded in a supervised schedule. Athletic support service personnel may ensure that athletes are checking their online agenda continuously in order to achieve their academic goals. Any kind of human interaction, faculty-to-student as well as student-to-student, is essential (Wolcott, 1996) for a student-athlete as part of a healthy academic and athletic environment. Whole student and complete athlete – can online education improve the relationship between these two ideals?

Summary

In 1999, Wyatt noted that the credibility of educators being capable of preparing students for life in the new, knowledge-based society is at stake. He argued that basic responsibilities to athletes are not fulfilled and that the situation is nothing short of a crisis for higher education. According to Wyatt (1999), incremental reforms and rule changes put into effect by the NCAA in the 1980s have primarily attempted to define eligibility for incoming and current freshman athletes. That is, they have concentrated on the minimum standards for athletes to enter college; this is one part of the equation. Educational attention has primarily focused on this part of the equation, even though it depends largely on factors beyond the direct control of university educators, such as the quality of K-12 education. This focus, however, neglected the other part of the equation, which addresses the accountability to continue educating these students beyond their first year (Wyatt, 1999). Today, considering the appalling numbers of athletic programs that do not meet minimum academic performance standards (APR cutoff score of 925) (Knight Commission, 2007), educators have a moral obligation to take an active role in the academic success of the athletes in those programs in order to promote the overall welfare of all students (Wyatt, 1999).

The Greeks taught that success should go hand-in-hand with athletic performance. This message must be communicated to students, parents, alumni, fans, and coaches beginning at the earliest stages of education: students need an intrinsic understanding that success on the playing field must be paired with success in the classroom (Wyatt, 1999). At collegiate level, responsibility has to be placed on each institution to provide academic counseling and guidance that is at least as rigorous as physical conditioning. Leaders of higher-education institutions should be held accountable to their beliefs and the missions that *all* students, regardless of their

background, have a right to academic success (Wyatt, 1999). Wyatt (1999) states that "if we don't seize the initiative in this critical area, we will place our credibility and our entire system of higher education at risk" (p. A56).

Student-athletes are a diverse and special population, challenged by their different roles on campus, their special needs and unique lifestyle (Etzel et al., 1996; Sedlacek & Adams-Gaston, 1992). Dealing with time conflicts and stereotyping are the primary issues a collegiate athlete is confronted with; this is where online instruction has the most potential to address concerns with traditional methods of education. Researchers' concern for the stereotyping of student-athletes (e.g., Adler & Adler, 1985; Engstrom & Sedlacek, 1991; Engstrom et al., 1995; Hamilton & Trolier, 1986; Seller, 1992; Simons et al., 1999) has been addressed by Simonson et al. (2006) and Vrasidas & Zembylas (2003) through the notion that online interaction makes it simple to reflect on each other's opinions posted in words, and is not conducive to biases, stereotypes, misconceived perceptions, or misinterpretations. In addition, the flexibility of the computer (e.g., Fowler, 2004; Hillstock, 2005; Simonson et al., 2006; Zhang et al., 2004) may accommodate student-athletes' special needs.

Nowadays, online education seems to be the largest growth area in education. How could online technology affect student-athletes whose athletic engagement puts a second layer on their academic demands?

Limitations and Further Research

Based on the literature review discussed previously, there is a significant lack of research exploring the topic of student-athletes and online education. Very little has been reported about student-athletes' experiences with and perceptions of online education, particularly the

differences between various sports, different class levels (e.g., freshmen), and levels of academic performance among athletes. Familiarity with technology will present another challenge for those from less privileged backgrounds. Will online education be difficult for them to manage? How can universities and colleges offer online classes for undergraduate student-athletes with so many different majors?

Zhang et al., (2004) reported that inadequately equipped online systems can result in frustration, confusion, and reduced learner interest. For example, some online systems only present text-based learning materials, which may lead to boredom and disengagement in students and prevent them from gaining a good understanding of a topic. Some of the multimedia-based systems suffer from insufficient learner-content interactivity and flexibility because of their passive and unstructured way of presenting instructional content. Under such a system, learners have relatively little control over the knowledge structure and the learning process to meet individual needs (Zhang et al., 2004). Rodriguez et al. (1995) believe that the success of online courses may rest on the perceptions of the student.

Future research is needed to further develop knowledge about what makes instruction effective and learning successful for this special population. Rather than proposing online education as the *ideal* solution for student-athletes, instructional technology could be used to provide general help. Could online education provide help for student-athletes? How can the use of specialized academic support services for student-athletes be improved to deliver information that cultivates cognitive skills?

The results of this study will be beneficial to student-athletes and athletic affairs administrators whose goal is to help student-athletes reach their potential academically.

Moreover, the results will provide a better understanding of the factors that are connected to academic performance and help increase academic motivation.

CHAPTER 3

Methodology

The purpose of this study was to determine the perceptions, practices, and concerns of student-athletes relating to online education at a large land grant university in the southeastern United States. This study examined whether online education could be an acceptable alternative to the traditional classroom in targeting the unique needs of student-athletes. The primary research questions for this study compare revenue and non-revenue athletes' perceptions with respect to the following:

1. What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?
2. What are student-athletes' perceptions of the benefits and barriers of online education?
3. What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?
4. Does spending a significant amount of time away from campus make online education a better method of learning?

To answer the research questions, focus group discussions and key informant interviews were used. Five focus group sessions were conducted: one pilot study, two with revenue[1] athletes, and two with non-revenue athletes. Each of the focus groups was scheduled for a discussion lasting between 1 and 2 hours. Key informant interviews were conducted with staff of

[1] Revenue sports are defined as team sports that can generate revenue (i.e., football and basketball)

the Student-Athlete Academic Support Service (SAASS) at Virginia Tech. The focus group questions and key informant interviews corresponded to each research question.

Population

Data was collected from selected student-athletes from various team sports at Virginia Tech, which joined the Atlantic Coast Conference (ACC) in 2003. Currently, Virginia Tech sponsors 21 varsity sports at the NCAA Division IA level (VT, 2007). The population for this study included student-athletes that are eligible for the 2007-2008 academic year. Student-athletes at NCAA Division I institutions are allowed four years of competitive eligibility within five years of enrollment (NCAA, 2006a). Key informants included a learning specialist, a systems administrator, two academic advisors working for revenue athletes (football upper-classmen and football freshmen) and an academic advisor responsible for several varsity sports, both revenue and non-revenue athletes. Each staff member of SAASS was employed in his or her position for several years. There were three females and two males among the key informant interviewees. All participants were Caucasians.

The mission of SAASS is to help student-athletes balance their academic and athletic demands by providing comprehensive academic support services such as tutoring, studying assistance, computing technology, and academic and individual skill development programs.

Focus Group Discussion

In a focus group discussion, a moderator leads a discussion with a small group of individuals to examine, in detail, how the group members think and feel about a topic. A set of predetermined open-ended questions, also called interview guides, directs a "focused" discussion among each focus group session, typically comprised of six to eight people who are not familiar

with one another (Krueger & Casey, 2000). The use of focus group methodology is a valuable qualitative research approach to data collection for researchers that allows people to voice their opinion, concerns, and/or interests about the topic of the focus groups (Johnson & Christensen, 2003; Krueger & Casey, 2000).

Focus groups are most effective when conducted in concert with one another. This allows the researcher to develop general themes that are reiterated across and within groups (Krueger & Casey, 2000). They are also useful as a complement to other methods of data collection and for providing in-depth information in a relatively short period of time (Johnson & Christensen, 2003). In this study, the researcher created a comfortable and permissive environment in each focus group that encouraged student-athletes to share their perceptions, practices, and concerns about their online education experience at Virginia Tech. The group members influenced each other by responding to ideas and the comments of others. The group discussions were conducted in concert with one another using similar types of student-athletes to identify trends and patterns.

Key Informant Interview

The use of key informants is beneficial because of their familiarity with the student-athlete community. Krueger and Casey (2000) suggest using someone who is familiar with the community of interest. In this study, key informants were specifically selected because of their knowledge of and their ability to report on the concerns and needs of student-athletes. The interviews took place during the last week of January in each individual's office and before the focus group discussions. None of the key informants received an incentive for participating in a 20 to 30 minute, personal interview.

The Group Moderator

It is recommended that the person leading the focus group discussion have good interpersonal skills and knowledge of how to facilitate group discussions. He or she must get everyone involved in the discussion of the researcher's questions and not allow one or two people to dominate the discussion. If conflicts or power struggles occur, the moderator should skillfully bring the group back to the task. The moderator must know when to probe or ask for more information and know when the discussion about a particular topic has been exhausted. It is not uncommon for the moderator to have an assistant who observes the group process, provides information to the moderator when needed, and takes notes during the session (Johnson & Christensen, 2003). In the current study, the focus groups were moderated by the researcher who also interviewed the key informants.

Sample Description and Selection Process

Student-athletes were purposively selected from Virginia Tech varsity teams. In purposive sampling, sometimes referred to as judgmental sampling, the researcher specifies the characteristics of the population of interest that can best provide the information of interest (Johnson & Christensen, 2003). Each focus group was expected to contain between six and eight participants, and was scheduled by the liaison of the athletic department. Focus group sessions took place in the afternoon between participants' practices and study hall in an office in the athletic department.

To be effective, a focus group must be as homogeneous as possible with respect to demographic and socioeconomic characteristics (Johnson & Christensen, 2003). To get as much commonality in a group as possible, the requirements for participation in this study as student-athletes at Virginia Tech were:

- being athletically eligible in the 2007/2008 academic year,
- participating in a revenue sport (focus group one and two) or in a non-revenue sport (focus group three and four),
- having a sophomore, junior, or senior status, and
- having taken at least one online course.

Key informants were also purposively selected by the liaison of the athletic department. Employees in the SAASS were familiar with the culture and history of student-athletes and the researcher anticipated that they would provide detailed and rich data.

Focus Group Procedures

Prior to conducting the focus group session, a pilot study was conducted: (a) to familiarize data collection person with the methodology, (b) to examine the interactions between the participants, (c) to identify problematic issues with the questions, and (d) to reword focus group questions that needed improving (Krueger & Casey, 2000).

The pilot test and focus group discussions were conducted in the format suggested by Krueger and Casey (2000). Each session was taped for later transcription. The researcher acted as the moderator for each session and facilitated all of the discussions, asking the focus group questions as well as probing to keep the conversation flowing. As participants arrived, refreshments were served and introductions made to familiarize the participants with the moderator and the rest of the group. The moderator began the discussions with a brief statement of welcome and an overview of the topic and ground rules as described by Krueger and Casey (2000). Participants were then informed that the conversations would be recorded, and they were asked to sign a consent form. After consent forms were signed, tape recording began with the

statement of welcome and ended after the main themes were summarized with the participants. The moderator followed the focus group interview guide and asked open-ended questions to promote discussion. The last segment of the focus group discussion required the participants to fill out a form about their time commitment for academics and athletics and their experience with online courses at Virginia Tech. Before and after the session, tape recordings were spot-checked to ensure proper recording.

Data Analysis Procedures

A written transcript was developed from the tape recordings of each focus group discussion. One advantage of written transcripts is faster sorting and categorizing of themes. Krueger and Casey (2000) suggest that the transcripts be read and reread so that the researcher will be familiar with the data. Following this repetitive reading, emerging predominate themes and sub-themes were identified.

Key informant interviews followed the same procedures as the focus group data collection. Written notes were reviewed to determine reoccurring themes provided by the interviews. Emerging themes were noted from each interview, and finally, grouped into major themes. Results from key informant interviews and focus groups were compared to draw conclusions about the major themes.

Validity

The questionnaire was approved for use in the data collection by a jury of experts for professional review and assessment and the Virginia Tech Institutional Review Board (IRB). These reviewers are qualified through their knowledge of research methods, experience in higher education administration, and subject knowledge to assess and critique the questionnaire.

CHAPTER 4

Results and Discussion

Demographics of Participants

Key informant interviews were conducted with five employees in the Student-Athlete Academic Support Service (SAASS). All participants were Caucasians, including two males and three females. Twenty-six student-athletes participated in four focus groups. All athletes had athletic eligibility in the 2007/2008 academic year, were non-freshmen and had taken at least one online course. They were purposively selected for two revenue and two non-revenue sessions. Nine revenue and 17 non-revenue athletes took part in this study. Demographic information is provided in Table 4.1.

The participating revenue athletes were older and had a higher class standing than the non-revenue athletes, perhaps explaining why they had taken a higher average number of online classes (4.5 versus 3.2). The table also demonstrates that non-revenue athletes devoted more time to both their academics and athletics. This might be attributed to the fact that most non-revenue athletes were in-season, whereas the revenue athletes in this study were not.

Table 4.1 Demographics of Focus Group Participants

	Revenue Athletes	Non-revenue Athletes
Number & Gender	N = 9 (males only)	N = 17 (5 females/ 12 males)
Ethnicity	Caucasian: N = 5 African-American: N = 4	Caucasian: N = 16 African-American: N = 1
Class Standing	Sophomore: N = 2 (22%) Junior: N = 1 (11%)	Sophomore: N = 6 (36%) Junior: N = 6 (36%)

	Senior: N = 4 (44%) Graduate: N = 2 (22%)	Senior: N = 4 (24%) Graduate: N = 1 (6%)
Age (in years)	< 20: N = 2 (22%) 20-21: N = 2 (22%) 22-23: N = 4 (44%) 24-25: N = 11 (11%)	< 20: N = 5 (30%) 20-21: N = 10 (60%) 22-23: N = 2 (12%) 24-25: N = 0
Major (Field of Study)	Broad array	Broad array
Time commitment on academics (per week)	1-4 hours: N = 0 5-9 hours: N = 3 (33%) 10-14 hours: N = 3 (33%) 15-19 hours: N = 2 (22%) 20-24 hours: N = 1 (11%) 25-29 hours: N = 0	1-4 hours: N = 0 5-9 hours: N = 3 (18%) 10-14 hours: N = 6 (36%) 15-19 hours: N = 3 (18%) 20-24 hours: N = 4 (24%) 25-29 hours: N = 1 (6%)
Time commitment on athletics (per week)	1-4 hours: N = 1 (11%) 5-9 hours: N = 3 (33%) 10-14 hours: N = 4 (44%) 15-19 hours: N = 1 (11%) 20-24 hours: N = 0 25-29 hours: N = 0 > 30 hours: N = 0	1-4 hours: N = 0 5-9 hours: N = 0 10-14 hours: N = 2 (12%) 15-19 hours: N = 5 (30%) 20-24 hours: N = 7 (42%) 25-29 hours: N = 2 (12%) > 30 hours: N = 1 (6%)
Days away during in-season semester	1-4 days: N = 0 5-9 days: N = 1 (11%) 10-14 days: N = 4 (44%) 15-19 days: N = 2 (22%)	1-4 days: N = 2 (12%) 5-9 days: N = 4 (24%) 10-14 days: N = 5 (30%) 15-19 days: N = 4 (24%)

	20-24 days: N = 0 25-29 days: N = 1 (11%) > 30 days: N = 1 (11%)	20-24 days: N = 0 25-29 days: N = 1 (6 %) > 30 days: N = 1 (6 %)
Average number of online classes already taken	m = 4.5	m = 3.2

Research Question 1: What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?

Table 4.2 Primary Concerns of Student-Athletes Related to Their Dual Career

A. Time Management and Time Constraints
B. Coping with Double Burden of Dual Career
C. The Freshmen Experience: Adaptation to College Life
D. Self-Assessment (Misperceptions about their own Personality and Abilities)
E. Self-Motivation/Focus
F. Preconceived Notions others may have
G. Catching up with Academic Studies as a Result of Intensive Traveling
H. Maintaining a Healthy Lifestyle

The primary concerns perceived by both revenue and non-revenue athletes were: time management and time constraints; balancing their dual career; catching up with academic studies as a result of intensive traveling; preconceived notions that others may have, and maintaining a

healthy lifestyle. Student-athletes in the different focus groups and key informant interviewees described similar concerns.

A concern specifically mentioned by revenue athletes was the freshmen experience, adaptation to college life. However, non-revenue athletes considered 'catching up with academic studies as a result of intensive traveling' to be a primary concern. They stressed the importance of doing their best in both arenas. For revenue athletes, time management and time-saving seemed to play a crucial role. Both revenue and non-revenue groups mentioned 'maintaining a healthy lifestyle' as a concern. The key informants specifically addressed self-assessment (misperceptions about own personality/abilities), which can be attributed to the freshmen experience. Several participants stated that concerns are open to change as time goes on. Depending on what's going on in their lives, certain concerns take priority.

A. Time Management and Time Constraints

Time management was the primary concern expressed by all key informants and both revenue and non-revenue athletes. Student-athletes are challenged to manage their time by balancing their schedules between academic and athletic commitments. According to one staff member, successful time management requires "trying to figure out how to balance all your time and all your energy so that you can complete all those competing interests." From the staff member's experience, dual-career students are concerned about how to coordinate their tight schedule and often come up with the same inner monologue: "Hey, I have to go to all of my classes, I have to do all of my homework, I have to lift weights, I have to meet with my coaches, I have to practice … How can I budget my time so that I have enough left at the end of the day to finish my homework before I go to bed?"

It appeared that athletics took the lead when it came to prioritizing activities. Student-athletes in both categories had a limited amount of time. Blocks of their time are reserved solely for practice. This was summarized by one non-revenue athlete as follows: "I have a problem scheduling my classes around practice because – like in the fall [when I am in-season] you can't take any classes after 3 pm and with me graduating in 3 years it is really tough to get all my credits."

Time management seemed to be *the* major concern of revenue athletes. In fact, the time aspect seemed to influence all of the other concerns and conflicts that were mentioned. Revenue athletes have an even more demanding schedule of athletic commitments than that of the non-revenue athletes. This enormous time commitment can be best expressed by the description of a regular day provided by a football player:

> Depending on the part of the year, in-season on a Monday you wake up early because you have meetings as early as 6 am. Then you may work out right after your meeting, then you go through a day of classes, start meetings again around 3 pm, then you go to practice from 4 to 7 pm, then you have study hall starting by 8 until like 10 pm. That's pretty much a day during a season.

B. Coping with the Double Burden of a Dual Career

Student-athletes have a hard time balancing both the academic and the athletic role. Non-revenue athletes express that they feel like they have two full-time jobs. They claimed that "essentially what we are doing is having a full-time job; what we put in sports is really like a *full*-time job." One athlete noted, "[I am] trying to keep athletically as fit as I can and at the same time to do well in school. That's two hard demands. Regular students have a hard time getting [school] done and doing a sport on top of that makes it even harder." Non-revenue athletes emphasize their academic aspirations at least as much, if not more, than their athletic aspirations.

Some student-athletes want a quality education in case they fail to become successful with their sport professionally. One non-revenue athletes phrased it as follows: “My main concern is just to get the best education that I can. And try to do the best in my sports as well and try to make a profession after I have finished school.” Another athlete conveyed that “I want a degree to fall back on if my athletics doesn’t work out after that; [my goal is] getting the best out of both my work and my sport.”

Many athletes stress how important it is for them to progress towards their degree, addressed by comments such as “[My] classes are sequenced and [it] takes a while to get to a class that I want to” or “My main concern is just go graduate in time and not to be hold [sic] up.”

However, athletes who would like to attain their degree must also deal with the high demands of their coaches, the physical drain, and the lack of free time. One non-revenue athlete expressed that their coaches expect them to perform highly academically: “Our coach expects us to excel in the classroom and she gets angry about people not going to class; not trying [hard].” Similarly, another commented, “The same with our coach; he is just all about academics. Be productive. You want to be successful on the field; you need to be successful in the classroom. This goes hand-in-hand.” A revenue-athlete added that “coaches are primarily concerned that you can play. You can only play if you are academically eligible.”

A staff member believed that revenue athletes may have different perceptions of education than non-revenue athletes in that revenue athletes may see academics as something else they have to do to be able to participate in their sports because they believe that their future lies in professional sports in which they can make a living whereas non-revenue athletes don’t necessarily see that their sport is something that’s going to pay for their education, as they would

argue “my education is going to be the thing that allows me to live a comfortable life and be successful”.

Another athletic advisor believed that giving 100% to everything causes stress, not only physically, but also emotionally, in that athletes could feel overwhelmed. He stated, “If you don’t have a good coping mechanism, the natural reaction is that you are going to shut down. And you are going to stop the one or the other. If sport wasn’t your primary choice, so maybe you quit your sport.”

A non-revenue athlete verbalized that “I am feeling overwhelmed, but more with school stuff than with sports stuff.” In contrast a revenue athlete expressed that “at times, I really feel overwhelmed. Towards the end of the semester, especially in football when you have to prepare for a Bowl and prepare for that, it is quite near exam time … it is really tough to find time to fulfill both [demands].”

Fatigue and exhaustion was another primary concern of both groups. Being tired from practice, working out, and other athletic demands has hindered them at some point in their academic careers. They fall asleep, cannot concentrate enough to study, and exhibit many other fatigue-related behaviors. A revenue athlete emphasized that “you are really tired, feel exhausted, and it definitely takes a lot of energy out of you. You just want to be back from practice, sit in front of the TV, [be] at 9 [pm] in bed. And you know that you have to prepare that class for tomorrow…”

In the same manner, a non-revenue athlete explained that “when I finish classes, then I have to go to practice and then I get home. I am exhausted from practice. More than if I just have had class. If I’d not go practice, I could do all my work. And when I get home, I mostly want to

relax for a little bit. And by the time I am relaxed, it is bedtime." Another athlete admitted that he oftentimes falls asleep the entire time in class because he was tired from waking up so early in the morning, having morning practice, and having to go to class.

None of the student-athletes in the focus groups complained about 'injuries,' a concern mentioned by several key informants: "with the action that takes place, the torn [sic] on [athlete's] body can be great … there are injuries, there is that constant lifting, running, practicing, playing, running into each other with high speed; and I think these guys get tired."

At the same time, student-athletes want to be social. Student-athletes' demands on time and energy for academics and athletics restrict their amounts of free time. One key informant believes that "a lot of them want to be involved in other aspects of being in university. So then they actually have *three* careers [but] they don't have much time left, if any." Their busy lifestyle requires them to cut short their free time. "There is no free time, not during the season, anyway," concluded a revenue athlete, "during season, it is pretty much hectic." Athletes mentioned that they would rather spend time with friends or catch up on sleep, than try to earn an A in class. Two athletes contended that: "I'd rather get a good night sleep and play well the next day than getting an A on the test" and "Free time - well, you *make* some kind of time … maybe one night at a weekend, …"

Revenue athletes reported that they felt constant internal pressure, as well as external pressure from their coaches and teammates, to succeed in academics and athletics. One revenue athlete emphasized that "there is pressure especially in football, you have thousands of people watching you, you are on TV, you are pressured to perform, to do well, and to succeed."

C. The Freshmen Experience: Adaptation to College Life

Revenue athletes, in particular, were concerned about the adaptation to college life as a freshman. They felt constant pressure from coaches, media, thousands of people, and as a consequence, dealt with anxiety. Athletes reported that they felt overwhelmed during their first year in college, because of a new environment and the higher demands on time and energy. One staff member stressed time management issues specifically for freshmen athletes, "I think that athletic concerns lead into academic concerns. Student-athletes that are really good students at high school aren't necessarily as prepared to do all the work in college. So when they have to do all the athletic stuff too, it's tough for them to manage as much time as they need do study."

Revenue-athletes commented: "[The freshmen year] can cause a lot of stress and anxiety … it is not anxiety to fail, it is more anxiety to please your coaches, please your academic coordinator people …"Another one noted: "You can be overwhelmed. We learned a lot since we were freshmen. And I think that's why we have study hall for two hours every day." A third revenue athlete noted "I think it is self-motivation. Looking at football, I would not have gone to Tech, just because of academics."

Freshmen are particularly susceptible to the pressures caused by time management. In addition, many revenue athletes seem to be highly motivated by what interests them most - their sport, and would rather spend time improving their athletic skills. For instance: "When you are a freshmen, you are not putting as much effort into school and then you start realizing how important it is as you get older and then you may put a little bit more effort [into school] than you may have coming in straight out of high school [when you] don't know how important school is." Revenue athletes emphasized that they were not used to the collegiate setting. They stated that as time went on, they learned what is expected from them, how to better discipline themselves and fulfill both roles. An athlete claimed that "I am in my senior year now [but in]

my freshmen year, I was finding myself falling behind in a lot of my courses mainly because I was not used to the environment." Another comment was, "When you are younger, you have more leeway in every situation."

Staff members of the Student-Athlete Academic Support Service (SAASS) were mainly concerned about an incoming freshman's academic background: "Some student-athletes are coming in with a great background and we get some students whose high schools didn't make them to be good students." Another advisor articulated that lack of interest seemed to be a barrier to performance in the classroom. The first step for an incoming freshman is finding an appropriate major. According to an academic advisor this can be a challenge when they have students coming into their office with the attitude 'I have to do school so I can play football'. This could best be expressed by a typical scenario:

> What should I major in? – Well, I am not making that choice for you. What are you interested in? – I am not interested in anything. What is the easiest major here? – The easiest major here is where you are most interested in. I can tell you this major has the most electives or this major has the classes that I may think may be the easiest, but if you don't have interest in anyone of them, it is going to be difficult for you because you will be sitting there hating them.

D. Self-Assessment (Misperceptions about their own Personality and Abilities)

A frequent concern about incoming freshmen is that they may not have anticipated the expectations. Staff members hear students complaining that "I did not realize that I have to do all this work!" Advisors believe that "It is much more self-guided on the academic piece … than it was when they were in high school" and "They do not know how to study, how to do things." The challenge that academic advisors face is that "Test scores aren't such great indicators … The best indicator of success is their work ethic and I don't know how you measure that and we don't know until we get [the freshmen] here."

All freshmen are required to participate in mandatory study hall. This is an opportunity to help them acquire the skills needed to be successful academically in college, assist them in meeting their needs, and to hold them accountable for spending time on their academics. One academic advisor stated "If they come in and try hard [and] are willing to put time [into their academics] … they need to do, they will be fine [academically]." There is a question, however, if they really want to.

E. Self-Motivation/Focus

Being self-motivated and wanting to excel and invest in college experience can be a huge barrier to motivation and focus. Most of the revenue athletes come to college through a scholarship, and do not think about graduation or earning a degree in the first place. Upper classmen are not immune to the issues of focus and self-motivation. It was noted by revenue and non-revenue athletes that classes have to be scheduled around athletics. Admittedly, when big games come up, academics will most commonly (and stereotypically) take a back seat, as reported by several revenue athletes.

Self-motivation was identified as a primary concern for a revenue academic advisor, specifically working with football players. Many students seem to have little to no motivation academically: "Some of our kids don't see graduation as the main goal … they see going to the [professionals]." An example of such academic detachment mentioned by the advisor was:

> I don't know all these things, I am not a good student, I am not motivated academically. It is really all the time focused on the things I love, which is my sport and I focus less on the things I don't like, which I am not interested in, which is my academics. And maybe my skills may be little greater in my sports.

One primary concern of student-athletes has been fatigue. Athletes stated that high physical demands can affect their focus and academic motivation: "If I am tired from practice all

the time, I cannot even focus. Every time when you are tired you know that you did it for a purpose." "It is discouraging to be tired and you have work [for school] to do. So it is all in your mind what you want to do – do half of your [school work], or wait to do it in the morning. It all puts onto my academics."

F. Preconceived Notions others may have

In general, student-athletes were aware of existing stereotypes about them. A non-revenue athlete stated that "you have that teacher every now and then [who has] that bias against student-athletes where [he or she does not] see it as an excuse to miss a quiz." Athletes in these groups believed that stereotyping was not a large problem at Virginia Tech, although it might be more a concern of revenue athletes in general. Most of their classmates seemed to consider non-revenue athletes to be more traditional students - playing sports as a hobby; whereas revenue-athletes were concerned about how others looked at them in their classes and the disrespect they received from many classmates. A non-revenue athlete argued that "The football players – that's where stereotyping comes in. But the other sports, just basically, it's their hobby … you are [not] a big star on campus. [As a non-revenue athlete] nobody knows you on campus and that you are playing a sport."

Non-revenue athletes mentioned that many professors and peers have misperceptions of the time commitment involved in being a student-athlete.

> Many teachers do not understand how much time it actually takes being a student-athlete. Being a student-athlete, that's like 'what are you doing? Playing a couple games'? … They don't think about all the meetings, conditioning, you have to lift. People do not understand how tired they are. They kind of really disrespect you for the things that you are doing.

A revenue athlete added that:

> I don't like my classmates looking at me and automatically … putting a label on. Basically, I want the respect as a regular student in the classroom and I don't want to have anybody looking at me like 'oh he is a football player. Don't take him serious. He is just here on a full financial free scholarship.'

Some revenue athletes, however, admitted that academics will come second:

> To be honest with you, I have had times being in season when we had a big game coming up and I *do* have the tendency to put academics and stuff on the background of the team. Because I mean, you put all the hard work into [sports] and then – it is natural. You have the pressure from your coaches, the media, all the people watching you in the stadium and watching you on TV … and you want that for yourself, and sometimes academics *will* take a backseat.

An advisor of the revenue sports expressed that "we have a large group of gentlemen that are living that stereotype … that perpetuate the dumb jock image."

The staff members, however, believe that it is unfair, yet common, to generalize attitudes and behaviors of a few individuals to all student-athletes by saying that 'no student-athlete cares'. An advisor stated "That is pretty offensive. That's a pretty general statement to say [because] you are speaking for 500 student-athletes. How many athletes [actually] self-identify themselves as student-athletes?" Another interviewee argued that "In the grand scheme, most of the kids want to seek … getting good grades. Once they graduate, they can seek some job or go to [graduate] school. The athletic part [however] can take away from that sometimes."

The academic advisor for football emphasized that two extremes could be identified:

> I have students in my group who are *really* busy but they really come and do extra studying to get their work done … or if they are [gone] for a long weekend, they are going to meet with the teacher ahead of time. [Whereas] others don't care as much and say 'I take care of that when I come back' and things can get piled up.

Staff member were mainly concerned about the negative impacts of preconceived notions. An advisor argued that "If you are already having a hard time managing everything and

then you have anything else on top of it, that's when it comes when one more straw breaks the camel's back."

Another interviewee believes that stereotyping is attributed to the problems of the past. The interviewee referred to the new regulations and eligibility requirements of the National Collegiate Athletic Association. He argued that "It is perception based on things of the past and not so much of now …[people] don't realize that some of the kids are really smart. They don't realize that there are football players that are [graduate] students."

Student-athletes agreed that they would be stereotyped if they were taking pure online education, because any kind of 'special' treatment would add to preconceived notions about student-athletes. A non-revenue athlete concluded that "we would be stereotyped, if we get something special …"

G. Catching up with Academics Studies as a Result of Intense Travel

The primary concern for non-revenue athletes seemed to be catching up with academic studies as a result of intense traveling. Though time constraints are a primary pressure on the athletes, the inconvenience of spending time away from campus, thereby missing out on information that other students in class receive, seems to be of even greater concern. The disadvantage of being away from campus was best summarized by one of the staff members:

> It's not like someone is taking the notes like you would do; the professor is not recording [the lecture] for you; so you can't go back and listen and learn. You have to figure out what [the professors] want you to have learned or to ask someone else in that class' what did you cover today' or 'what will be on the quiz this week'?

The football players in the revenue groups noted that intense travel would not apply to them, as they may only miss 1-2 days. There are also freshmen football players who usually do not travel at all.

H. Maintaining a Healthy Lifestyle

The concept of a healthy lifestyle was noted by both groups. They see the connection between getting enough sleep and achieving an optimal level of energy. A non-revenue athlete expressed that "I just can't stress too much out … it's a lot about time management and how you use your time. Good night sleep always helps." That agreed with a revenue athlete, who stated "I am always exhausted. Making sure you sleep right and as much as you can. I think most time of the weekend, I sleep. Work will be done during the week." Maintaining a healthy diet was a concern by one revenue athlete: "An overlooked part, just something simple, is maintaining a healthy diet. [Athletics] can really be hard on you. It can stress your body out physically and cause fatigue." Another student added, "Especially if class is at 8 am and you have to rush from 6 am practice and try to get some food at the run … you really don't have [a] chance to regroup."

Research Question 2: What are student-athletes' perceptions of the benefits and barriers of online education?

Perceived Benefits

Perceived benefits of key informants and student-athletes for both categories were (a) flexibility in time and location, (b) convenience, (c) options to make up for missed classes on account of tight schedule, (d) alleviation of preconceived notions through more objectivity, and (e) accommodation to different learning styles (see Table 4.3).

Table 4.3 Perceived Benefits of Online Education

A. Flexibility in Time and Location
I. Online education helps with time management.
II. Less need to travel to and from campus.
B. Convenience
I. Ability to work at own pace/self-pace.
II. Technology is easy to use.
C. Options to make up for Missed Classes on Account of Traveling
D. Alleviation of Preconceived Notions through more Objectivity
E. Accommodations to Different Learning Styles

A. Flexibility in Time and Location

Both revenue and non-revenue student-athletes liked the freedom and flexibility of completing their school work whenever and wherever they wanted. The emerging sub-themes were that online education helps with time management and there is less need to travel to or from campus.

I. Online Education helps with time management.

Referring to time management, the primary concern mentioned earlier, the staff members believe that "the flexibility [of online classes] makes it easier to work around the regimented athletic schedule." It enables athletes to "create a hole during [the] day where [they] can get something else done" or "come back to [their schoolwork] another time." With online education, athletes "don't have to be in class at a certain time. [Having an online class], that's one less time that students physically have to sit in that class." Another staff member believes that "Revenue athletes in particular perceive it as easier because there is no class attendance, so they don't have

to work out classes. They don't have to interact with professors per se, they don't have to give excuse notes, they don't have to follow up, and they don't have to receive missed notes. So I think it is easier…"

As time constraints are their biggest concern, the majority of revenue athletes perceived online education as a great help in managing their time. They mentioned that online education helps them save a lot of time and removes a large weight from their backs in that "you can make your own schedule, especially during season. This makes a difference because you are comparing going to 3 or 4 classes a day; this saves you a lot of time."

II. Less need to travel to and from campus.

Student-athletes emphasized the diminished need to travel to or from campus and gaining more time by taking online courses, which provides them more time to focus on the things they enjoy, oftentimes their sport. A revenue athlete stated that he has a lot more time when he takes online classes. He explained that attending class "takes 30 minutes to get ready, 20 minutes to get there, 20 minutes to get back [plus] one hour and 15 minutes [to attend class]. Meanwhile, you sleep in, do your 45 minute reading, finish, and take your quiz." Student-athletes contended that with online education, they were not bound to come to campus at a certain time, avoided common irritants such as driving to class, or finding a parking space. This was best expressed by a non-revenue athlete who stated: "It is nice to not have to walk or drive to campus, finding a parking space, or ride the bus to another class. It is more relaxing to simply work in my apartment and learn the material there." A revenue athlete agreed saying that "you don't have to get up; [you] just get your laptop." A revenue athlete claimed that "you are not really pressured. You don't have to do [work] every day if you don't feel like …"

B. Convenience

I. Ability to work at own pace/self-pace.

All athletes highlighted the fact that they appreciated that they could manage their time better and fit their schedule around their athletic commitments. If they felt tired or unmotivated to work, they could complete their homework or study at a more convenient time. Fatigue has been a prevalent concern for all student-athletes. A non-revenue athlete stated that, "Taking online classes helps to regulate your sleeping patterns because you can plan around practice and other events to maximize your learning experience." Another athlete agreed that "I could just wait until I am more awake and do the work then. If I am tired, I am not able to get a lot out of it …". A revenue athlete stated that "having a long day it is tough on athletes. These online classes will help us because there is a lot more time for you – as long as you stay on top, it is definitely more a benefit than negative."

II. Technology is easy to use.

One interviewee stated, "If students have been here and understand how to use Blackboard, how to email professors and things like that and have the skill to communicate, they are excited to take online classes." This seemed to be true for all student-athletes. A revenue athlete expressed, "I like the computer, being accessible information 24 hours regardless of where I am … I mean almost all courses are somewhat online just because I go to Blackboard."

Several participants in the revenue groups stated that there would be no way to evade technology and it is essential to stay up-to-date: "I think people have no choice because the way the world moves and the speed that technology; you must be up-to-date or you are going to be left behind. I think online classes are the only way to have college life in the future." They

believe that the trend will be more towards online education. Participants in all four discussion groups reported that they felt comfortable using technology and, as such, valued the fact that they had access to class material 24 hours a day that internet access provided.

C. Options to make up for Missed Classes on Account of Tight Schedule

Student-athletes most appreciated the opportunity to take online classes during their season when they are required to miss a lot of classes. Research question 4 deals with the relationship between online courses and amount of time spent away from campus in more detail. The staff members believe that online education could make life a lot easier for student-athletes: "We don't have to worry about missing class because they can just go and watch again the recorded video at any time they want" and "they can go ahead and catch back up with the class material. So they are not falling behind."

The football players in the focus groups stated that they were not traveling as much and would not miss class as such; however, the revenue athletes emphasized that taking online classes would be a significant benefit if they were traveling a lot. A comment was: "[online education] is much better because…you pretty much have access to that class anytime. In a traditional classroom, you can only have [access] during that time at that day. But with an online class you basically do whenever you want to, everywhere, and any time as long as you got a computer." Non-revenue athletes, in particular, claimed that they could get work done earlier which removed a lot of stress and gave them more opportunity to spend more time on other things: "I think it helps you because you can get the work done early so you aren't spending time anticipating an upcoming test on a day or may have a game. It's also better because you can plan for the unexpected." "If you manage your time properly, you can learn the material

presented in a less stressful and more relaxed environment - which is always a plus in season." "I could get ahead on the work and I could do the work in my own time and be able to spend more time on my sports."

D. Alleviation of Preconceived Notions through Objectivity

Alleviation of preconceived notions through more objectivity was of minor importance, as suspected because Virginia Tech was perceived as having a fair campus. Revenue athletes emphasized that no name could be attached to a face, which would be good way to remove any stereotypes that were present.

An interviewee mentioned online education as a way to minimize stereotypes "because [an online environment] is more anonymous and teachers cannot put a name with the face." A revenue athlete similarly stated that, "When I walk in a classroom, people have to think I have to play some kind of sports, all the looks of those people. So when you are taking a course online, the only thing that they see is your name."

Also, non-revenue athletes believed that stereotypes could get removed to some extent, as long as athletes are not taking their complete education online. Another athlete added that, "I just don't want to see [online classes] replace teachers. There is a certain interaction between a teacher and a student whereas just starring at a computer screen it is just not the same."

E. Accommodations to Different Learning Styles

A revenue athlete added that "a really good aspect about online education is that [with online education] everybody gets different ways how they would like to learn. Online education basically gives you options of how you would like to do it." An academic advisor expressed that

he had students say, “I feel a sense of control, or a sense of ownership. It is like ‘this is my class, I know what I have to do, I know I have to learn it; if I fail the quiz, it is not just because the professor didn’t give me the notes, it is because I did not read it.’”

Another academic advisor stated that one of her athletes has had good experiences with Centra. According to the student, the synchronous chat could stimulate a traditional classroom experience.” Centra is a tool for online multiple-user interaction and course organization that includes real-time two-way audio, application sharing, web browsing, white boarding, and text chatting. Another staff member liked the asynchronous online environment and argued that “we think both ways. We are not living in a constant question-response-question world … with asynchronous chats there is no time urgency; more reflective thinking, or deeper level of thinking, is possible.”

More about student-athletes’ views about accommodations to different learning styles will be discussed in the section related to Research Question 3 (What type of online learning environment could increase learning satisfaction and learning outcomes?).

Perceived Barriers

Revenue and non-revenue athletes as well as key informant interviewees perceived online education to be more challenging because of (a) missing structure and lack of deadlines, (b) reduced accountability, (c) limited interaction with professor, and (d) the need to use time management and planning skills. Key informants perceived additional barriers, including (e) technological barriers and (f) negative influences on academic progress, (g) misperceptions on the part of students, and (h) cheating issues.

Table 4.4 Perceived Barriers to Online Education

Online Courses are more Challenging because of
A. Missing Structure/Lack of Deadlines
B. Limited Interaction with Professor
C. Reduced Accountability
D. The Need to use Time Management and Planning Skills
Perceived Disadvantages (Additional Themes of Key Informants)
E. Technological Barriers
I. Access to internet.
II. Broken computers.
F. Online Course have Negative Influence on Academic Progress because
I. Technology might not be used effectively by professors.
II. Professors are not willing to get online.
Perceived Problems
G. Misperceptions on the Part of Students
I. Online classes are believed to be easier than regular classes.
II. Online classes are believed to more effective because of self-pace.
H. Cheating Issues
I. Honor code violations.
II. More temptation to cheat in online classes.
III. Greater magnitude of cheating.

A. Missing Structure/Lack of Deadlines

Online courses were perceived to be challenging as a result of missing structure and lack of deadlines. Several student-athletes complained about the set-up of some of their online classes and reported of some bad experiences they have had in their online courses. A non-revenue

athlete mentioned that "some of his classes weren't well-structured … and you got confused." Another athlete added, "if you have a set date in class, you kind of *are* forced to do work whereas in an online class it is up to yourself. You work on your own pace. It makes it extremely hard if you are not keeping up and falling behind."

Non-revenue athletes, in particular, complained about the set-up of the math classes. Others did not like the way assessment took place in an online environment. A non-revenue student was unhappy with his online group project and considered any kind of synchronous environment as a hindrance when being in-season. Group members did not like having to work around the athlete's time schedule. Their dissatisfaction with their math classes was expressed by: "That's kind of a hassle going there …and taking a weekly quiz." Other members in the focus group complained about unfair time allotted for quizzes and tests as well as unfair grading. "I did not enjoy [online] math because you cannot get any partial marks for half completing the question; only for the exact answer," was one of their comments.

One participant encountered some difficulty with the synchronous environment of his online class in that he had difficulties scheduling common group times for projects: "we had a lot of group assignments and my group wasn't really that happy to schedule around my schedule…" He felt that if the class excluded groupwork, it would be easier to take. He did not like the hassle of meeting with his group during season and with classmates who "don't understand the kind of things we need to do with practice…" This perceived attitude refers to the misperceptions of what being a student-athlete entails.

The biggest challenge perceived by almost all student-athletes was staying on top of their work. As much as they appreciated the convenience and flexibility of taking online classes, they

reported falling behind and dealing with consequences of procrastination. This was contingent upon the lack of set due dates or the lack of quality of overall communication. Some comments were: "You have a set date in class, you kind of *are* forced to do work whereas in a online class it is up to yourself. You work on your own pace. It makes it extremely hard if you are not keeping up and falling behind." "I think [online education] is definitely more convenient, but it is easy to get off track. It's about how to keep up with the dates and everything is due; otherwise you get screwed."

B. Limited Interaction with Professor

Student-athletes often complained about the limited interaction with their teachers or professors. Being separated by space and time is a challenge for both teacher and learners because it limits channels of communication. The fact that there are no face-to-face conversations inhibits free-flowing interaction, especially feedback. This was best expressed by this participant's comment: "Unlike a traditional classroom [in an online class] you don't see the professor 2 -3 times a week and can't give them a face-to-face talk. Online it is a little bit harder trying to catch [the professor] during office hours. [You] have to rely on email or other technology." Teaching usually anticipates spontaneous give-and-take, thus takes interaction for granted. Because sensory channels are reduced, there are fewer opportunities for informal conversation. Both revenue and non-revenue athletes emphasized the limited, or lack, of interaction with their professor as a hindrance. Athletes were concerned about having to write an email if they had a question, not getting high quality feedback they wanted, or spending extra time meeting with the professor during office hours. A key informant stated that, "Even though the athlete may get an answer to his or her question, it may neither be as quick nor the quality

[desired].” Another disadvantage reported by an advisor is the need to “find time during the week to go [to the professor’s] office hours.”

Several students alluded to their preference for taking classes in a traditional setting because they needed a teacher to explain the more difficult content and wanted immediate feedback if questions arise. This is especially true for their harder upper level classes. Non-revenue athletes would prefer learning by watching and listening than having to teach themselves. Student-athletes expressed that, “For some classes you need a teacher, like in a math class. You need a teacher to show stuff because you can’t work it out by just looking at the examples…” “It is so much harder to say something in writing than it is verbally. For upper-level classes, I’d prefer a teacher in the classroom.”

C. Reduced Accountability

As opposed to a traditional class, online learners do not see their teacher every day. No one holds them accountable per se; it is the students who are responsible for their schedule and keeping up with the work. Additionally, they must work towards a goal and find time to do assignments and thus stay focused. One advisor noted that “online education has a ‘teaching yourself aspect’ and you are up there lecturing on your own. But it is not quite the same like sitting in a classroom. There is no teacher reminding you for that test on Monday.”

Some non-revenue athletes reported that being in an online class could make them forget that they are in that class just because they don’t go every day. In the same way, revenue athletes felt that they needed someone like their coaches who they see every day, and who check on them and hold them accountable. “As there is nobody to hold you accountable,” stated a staff

member, " student-athletes run the risk … once [they] are not on top of things and not vested in academics for any reason … to forget that they are in that class."

D. The Need to Use Time Management and Planning Skills

All student-athletes were aware that they need time management and planning skills to be successful in an online environment. Online learning requires strong self-motivation, self-discipline and assertiveness. The online learner spends most of his or her time in front of the computer, which is not similar to a traditional classroom. They are their "own" teacher and must be able to set their own deadlines and short-term goals. Assuming responsibility for an online class seemed to be an obstacle, especially for revenue athletes, if the subject matter is not relevant for them or entailed more work than the same class in a classroom setting.

The advisors agreed with the athletes in that "being successful in an online learning environment requires a lot of planning on the student-athlete's part." "Athletes are mainly responsible of managing their time wisely and planning out their dual career effectively." A non-revenue athlete considered the most important skills to be self-discipline ("control yourself when you do your work"), and time management ("it is important to be able to work your athletic hours around your class and homework things").

A highly motivated revenue athlete reported using the following strategies: planning out a whole semester in advance, marking all due dates, and following through. These strategies make it necessary for students to be proactive and to build good relationships with their professors. In addition, he stressed that in an online class you need to have the desire to work hard, show interest in class, and try to not live up to any stereotypes of student-athletes. This revenue athlete

conveyed that, “If you are teaching yourself and you are learning from yourself, and you have the capability to do it, [online education] is very beneficial. I cannot speak for many. I know that there are people who don’t have the skills like me.”

E. Technological Barriers

Key informants mentioned that access to the internet, along with broken computers, limit the effectiveness of online education.

I. Access to internet.

One non-revenue athlete mentioned lack of internet access to be a technological barrier to online education when she is on the road. She would not be able to do any work during games or in the hotel without internet access. She stated, “It is really hard when you are on the road and … you go to a hotel and they don’t have an internet connection and you didn’t get [your work] done before you left …” As such, she claimed that, “for some lessons, having a book and … doing book assignments make it easier [because you do] not have to worry about the internet.” The lack of internet access while traveling was perceived to be a disadvantage by some staff members. One staff member declared that “in a synchronous situation… you have to be online at a certain time which is contingent on the access to internet which [does] not work well with the student-athlete’s schedule when they are on the road.”

II. Broken computers.

A staff member reported that “[Student-athletes] are getting paranoid [when they] have problems with laptops breaking for various reasons.” Although another participant believes that

"all these problems seem to be less and less of an issue. It took them weeks to get resolved [in the past], but now it seems…it is much quicker."

F. Online Courses have Negative Influence on Academic Progress

Many key informants remarked that an online course may have a negative influence on a student's progress because of the inefficient use of technology or the unwillingness of teachers to provide more online opportunities.

I. Technology might not be used effectively.

A key informant believed that sometimes professors can get so excited about the technology itself that they run the risk of neglecting the quality of instruction and clear communication. A staff member described one situation where "[she] had one student who dropped out of an online class. It wasn't through Blackboard; the teacher used a blog and it seemed overwhelming because it was not clear cut. The set-up hindered [the student] and the class design did not fit him very well." This also may be attributed to student-athletes' perceptions of inadequate structure, as described above.

II. Professors are not willing to get online.

One staff member was concerned about the willingness of professors to get online. He heard faculty saying: 'Computers? Oh no, I am too old; I will not touch the computer.' He believes that there is an education barrier and contended, "The Yale graduate who spent most of the time in the classroom - and that's how [those professors] are thinking."

Some professors may prefer the classroom setting. A few revenue athletes in this study expressed that "We have been brought up in classes and in classrooms and that's what we are

familiar with." The staff member, however, believes that "taking the class online does not necessarily mean we are removing something from the classroom experience, rather it is to improve the quality of the classroom. It may even help in delivering complex information."

G. Misperceptions on the Part of Students

The key informants claimed that misperceptions of online education appeared to be prevalent; online classes are believed to be easier than regular classes and online classes seem to be more efficient because of self-pace.

I. Online classes are believed to be easier than regular classes.

An advisor reported that some of their athletes believe that online classes would be easier by saying, "you don't have to go to class, there won't be as much work, the tests aren't as hard, the books are right there, most time it is open-book, you don't have any class attendance." A staff member stated that online classes *are* easier in that "they are more flexible, save a lot of time, [athletes] don't have to be physically in class, they do not have to deal with the professor; yet the class remains the same." The problem with online education, however, the interviewee thinks, is that "student-athletes take it too easy and sometimes gets them into procrastination" which makes the class harder for them.

II. Online classes are believed to be more efficient because of self-pace.

According to some of the advisors, student-athletes perceive online classes to be more convenient because of the freedom and convenience that comes with them. Staff members quoted athletes saying "as long as I finish this at the end of the semester, I will be fine" but they

reported better student-athlete performance when there were very strict deadlines instead of in an online class that claims that "you have to complete this by the end of this semester."

H. Cheating Issues

The pressure to meet academic standards may lead to more cheating.

I. Honor code violations

Two athletic department academic assistance employees at Florida State University and 23 athletes were implicated in a cheating scandal, involving tests given over the Internet. The athletes represented nine sports, and 17 of the students were on scholarship ("Florida State Inquiry," 2007). The pressure to perform well on the field and in the classroom, along with the popularity of online education, might be a controversial topic in the future. This possibility was mentioned by several revenue athletes. One staff member sees the use of online classes by student-athletes growing, but she fears that "it seems that growth will possibly bring along some issues."

II. More temptation to cheat in online classes.

A key informant thought that the temptation to cheat in online classes would be higher than in regular classes because student-athletes may think that "it is an online class and nobody is looking." Another comment was that it may be easier for young people to say "this is stupid, they are giving me the test, they rely to me [to do this test] whenever I want with whatever stuff around me. If I want to take that test with books around me, this is allowing me to cheat and that makes it ok." Several staff members articulated that if the testing takes place in a room with someone watching it would be a whole different situation:

> In a classroom, there are professors up there, they are handing out the test, putting all your materials away, and you *know* that people understand that cheating is wrong. Taking it online, I can access it on this website and they know there is no one watching. This is basically giving me permission to cheat. Cheating is OK.

Though there is the belief that there is more temptation to engage in dishonest behavior in online classes, several advisors believe that "whoever wants to cheat, will cheat." A student wanting to cheat would do so in both a classroom and an online environment. One advisor added, "It's the set-up of classes. Online education makes it hard to monitor, which may be a downfall."

III. Greater magnitude of cheating.

The lack of monitoring induced another interviewee to state that the magnitude of cheating would be higher:

> It's more the amount of cheating because when you are in a classroom and you are cheating it is one-on-one, 2 people, or 3 people. But online it seems that it can be mass-distributed … I think that's the potential problem athletics has with online classes possibly because of the things that have happened with Florida State University and the large number of students cheating with their online class. I know that UVA [University of Virginia] does not have them [online classes] and I don't know if that's because UVA does not offer them or if student-athletes just don't sign up for them.

Implication: Willingness and Readiness for Enrollment

Having learned about student-athletes' and key informants' perceptions of the benefits of and barriers to online education, it was of interest to what extent key informants believe that student-athletes are willing and/or ready for an online learning environment.

Table 4.5 Willingness/ Readiness for Enrollment in Online Courses (Key Informants)

A. Willingness
B. Readiness
I. Depending on major and class offerings.
II. Need to understand what online class entails.

III. Need of characteristics/skills for online environment.

IV. Different perceptions on education.

A. Willingness

One key informant interviewee considered the initial experience with an online class as the major factor in willingness to take another online class: "if you had a bad experience initially that may lead to not want to take another [online class]. Positive experience may be that they want to do it again." Looking at the revenue sport of football, there appeared to be two extremes as expressed by one advisor:

> I think the majority of our [revenue] students are willing to take online courses because they like the freedom that it gives them. [On the contrary] some of those students I work with, don't want to because they understand that they took once one course, they got behind and they really messed them up and it is hard for them to take online classes. That's the minority.

B. Readiness

Readiness may be attributed to the misperceptions on the part of students that online classes are easier than regular classes: "They are [ready] if they really spend time to understand what the online class entails. If they just go into it with the perception of 'it is easy. I just get it done whenever I want' then they are going to have a difficult time," was a statement by one advisor.

When looking at the revenue sports, specifically football, an advisor said: "Are they ready? I would say 50:50. About 50% are ready to do the work. The other 50% aren't ready. They think they don't have the skills." To help the half that does not feel ready for an online class, and who consequently struggle with it, the advisor stressed the importance of SAASS and

tutors who can help. “We have to try to artificially create a situation that allows them to be able to take it.”

Another staff member believed that student-athletes are not ready for online classes because online classes would be more work: “In an online class, they will give you more material; they are giving you more homework or more ways to solve problems.” He added that this does not necessarily mean that student-athletes do not want to work hard, but he emphasized that “athletes already have *a lot* on their plate.” Instead, he believed that it could work if “the professor makes the online material either to replace what is going on in the classroom or is supporting material that is not required.”

I. Depending on major and class offerings.

A staff member expressed the opinion that “It depends more on the major that they are working on because if I look at football players, they don’t have a whole lot of options for online courses.” Another comment was, “As you get further along in your education, there aren’t as many upper level courses that are available online.” The participant referred to classes being offered *strictly* online as he stated, “All of the courses have online components.” However, all key informants agreed that a crucial factor is the initial experience with online classes: “I think if student-athletes have bad experiences, they really shy away from taking online courses again.” As mentioned earlier (Research Question 1), some athletes come to college with a poorer academic background than others. Some of them may have difficulty in math classes during their first semester. A staff member acknowledged, “The math courses…are online here at Tech. If a student-athlete has difficulty with that class, then they are hesitant to take another of these

classes." Consequently, the potential for an initial bad experience with online classes may give a bad impression of online courses for some student-athletes, particularly revenue athletes.

II. Need to understand what online class entails.

The key informants mentioned several misperceptions of online education: online classes are believed to be easier than regular classes and seem to be more efficient because of self-pace. Student-athletes have to be aware of benefits and challenges of an online environment, need to know what will be expected, need certain skills, and must pay attention to their current situation, such as their travel intensity, learning style, prior experience, time schedule, work load, season, and so forth. When asking the key informants about their experiences with student-athletes dropping out of online-classes, a staff members stated that "it is just like dropping out of any other regular class: you have the eligibility issues … you have to meet those certain percentages towards your degree requirements, keep your GPA up …"

Another staff member emphasized that students could only drop a class up to a certain point in the semester. He referred to the basketball team that begins their season in September when the players do not know what their academic and athletic loads are going to be like. Once the season starts up, he heard students-athletes say 'oh man, I have so much to do and have to drop something'. The staff member added, "but guess what, it is October, the drop date is passed." In order to prevent those situations, he stressed the importance of making the right choices beforehand, "that's where this office [SAASS] comes in. It is very important to help student-athletes determine how many classes to take, how much work a particular course requires. So you can balance, meet all requirements, and comply with NCAA rules."

III. Need of characteristics / skills for online environment.

Skills needed for an online learning experience include time-management, planning-skills, self-discipline, self-motivation, being able to teach oneself, being able to pace oneself and keeping oneself accountable. A key informant stated, "I think they have the skills to do it; it is just whether they have the organization or management or motivation to do it." Student-athletes are willing and ready, "If the student is vested [in online classes] and sees the benefit. We have students saying: this is better for me; I don't mind the online learning style or always being self-paced, or learning through chats, blogs …"

IV. Different perceptions of education among revenue and non-revenue athletes.

Although non-revenue athletes and revenue athletes may see online education in a positive light, some key informants believed that their reactions might be different when student-athletes realize that an online class is not an easy load. One comment demonstrated the differences the best:

> It might be that…non-revenues, when they realize that it is not easy, though they might be shocked, they are able to go with the flow, [and] are able to maintain the grade that they want to get. Some revenue athletes may get overwhelmed, and that maybe comes down to not having as much learning background. They get more shocked…and maybe tend to give up…. Then they don't follow through as much or don't get that grade that they thought that they were going to get.

The academic advisor for basketball, however, stated that her revenue athletes have gotten along fairly well with online classes.

> Not because [online classes] are easy, but because they would rather work harder in an online class than go to class." She believes that "Some of [her revenue] student-athletes work harder in online classes so that they don't have to sit through the class and do their work. They can just work. The work is the class, so they try harder. Because they see the benefit of not having to go to class, they are willing to say 'I am not going to class. So I work my butt off, if I don't have to go to class. I don't have to worry about missing class or missing the test. I don't have to worry about trying to work with a professor who does not want to work with me, or I am not going to miss something'.

Recommendation of Class Format

Considering the benefits of and barriers to online education and their perceptions of willingness and readiness to take an online class, key informants were asked which class format they would recommend to a student-athlete, and why. ("Imagine you have to advise a student-athlete in taking a course which is offered both online and in a traditional setting. What would you recommend and why?")

Recommendation is dependent on the individual student, taking into account:

In-season/ Off-Season	Learning style
Student's schedule	Maturity
Travel Intensity	Prior experience
Class dynamics	Coaches' Decision

Selected comments that were prevalent and best summarize their decisions appear below.

In-season/ Off-Season: "If they are in season, I would suggest online classes because of their time schedule and the flexibility [of online classes]. If they are not in season, I may recommend the traditional course so they can interact with the professor."

Student's schedule: "Student-athletes have a lot of classes they have to take and they have to practice. There might be things on their schedule in time-conflict. In that case it would be better to take it online."

Travel Intensity: "I would recommend an online course [when they travel a lot]. And the reason I say that is, particularly in spring, baseball and basketball, they travel so much and they

have so many different games during the week that it is much more advantageous for them to take an online course so that they don't have to miss class just like a soccer player who is not in season."

Class dynamics: "It also depends on which other classes are taken. How many other classes are they taking? Are they taking any elective classes? Do they count towards their major?"

Learning style: "It depends on each individual student-athlete and the three learning styles: kinesthetic, auditory, and visual. Some students will be so bored in an online class and will not pay attention to it. [They] need to walk over to class, to the building by taking a class and listening to the professor, watch the professor write on the board. So every student-athlete is a little bit different."

Skill Set/ Maturity: "You have to make sure that they get on the computer around a certain time; if they are not reliable to do that – and that goes back to time-management issues – they are going to have trouble. You have to work with someone who does have responsibility to handle it."

Prior experience: "With freshmen it comes to the hardest part; you can only judge by their program in high school; you have to assume. One of the things you can do is to take a look at the math classes. All those math emporium classes are completely online. How did they do in those classes? If they did horribly in those classes, maybe online is not such a good idea. If they seem to manage it pretty well, you can take another online class."

Coaches' Decision/Team Dynamics: "Some coaches do not want freshmen in any online classes because they think that they may not handle them whereas when they are in-season and

travel a lot, they may be in favor of online classes." "In general, student-athletes are advised by their teammates. So much advising is being done peer-to-peer rather than from an advisor to a student."

The advisor for the football freshmen would not coerce or force students to do something that they may not want and that may not help towards their academic motivation.

Student-Athletes' Preferences Regarding Class Format

After discussing their perceptions of online education, student-athletes were asked which class format they would prefer to target their specific needs.

Table 4.6 Willingness/Readiness for Enrollment in Online Courses (Focus Groups)

Non-Revenue
A. Non-Revenue Athletes Prefer Taking the Course in a Traditional Classroom in Order to Learn
B. Non-Revenue Athletes Prefer Taking Online Courses for Reasons Including Time, Travel, and Easy Credit
C. Non-Revenue Athletes Ask for More Online Course Offerings During Their Season
Revenue
D. Revenue Athletes Have Had Positive Experiences with Online Courses
E. There are Two Extremes: Revenue Athletes who Enjoy Taking Online Courses Versus Revenue Athletes who Try to Avoid Taking Online Courses

A. Non-Revenue Athletes Prefer Taking the Course in a Traditional Classroom in Order to Learn

Non-revenue athletes perceived upper level classes to be harder than core or elective classes. Many felt that they learn more when taught directly by a teacher instead of relying only on their own knowledge. Some comments were: "At an intro level, I would take online classes every day. At an upper level, it is so much how you teach yourself. So it is so much better to have a teacher in front of you who tells you what is going on and you can ask questions like right away. You don't have to write an email or set up a meeting." "In-class it is better to take notes of what the teacher is saying and you are actually hearing it and write it down. In online courses, you only take notes from the notes." "Usually in online classes you do as much work as you need to possibly pass. Not extra work or anything like that. I'd say I would like in-classes to learn, but online classes for time."

B. Non-Revenue Athletes Prefer Taking Online Courses for Reasons Including Time, Travel, and Easy Credit

In terms of time and convenience, one student noted that "It was so much easier in my intro classes to do the work all by myself instead of going to class every day, listening to the teacher and having to take quizzes and less time-consuming for me than going to class every day." Many non-revenue athletes are taking online courses for easy credit, as shown by several comments: "I think I would never take [online] for a class where I really wanted to learn. I take online classes to get easy credit. I feel as if online classes just focus on grades rather than learning." "I would like to take an online class like English where you do not need to have much explained, like Math class." "I will only take online if it is for a lower level elective class, something that won't be as difficult or time-consuming."

Confirming the key informant's impression that student-athletes are advised by their teammates, several athletes noted that "A lot of athletes have already taken a lot of the intro level courses and you can just talk to somebody and know how they did it and see what works better for you."

C. Non-Revenue Athletes ask for More Online Courses During the Season

Most of the athletes prefer online classes when they travel, as described by the following quote: "[Online classes] are nice when you are in-season because you don't have to go somewhere to go to class." Another student referred to the concern stated earlier that student-athletes are oftentimes tired and not capable of devoting more energy to school work: "During the season you are just constantly tired from practicing, playing … when you come home, you just want to lie down … it would be great if a professor could put all information online that you have missed. So you can access it whenever you have time."

D. Revenue Students Have Had Positive Experiences with Online Courses

One revenue athlete believes that online classes are more beneficial than sitting in a classroom in that "[an online class] more says you what you have to do at the outset and then it just helps with your schedule. I don't know about easy. [Online classes] still have kind the same stuff for the class. It just depends on how your schedule is; I just don't have so much time left. So I think it is more efficient". He added that, "In a lot of [traditional] classes, you have more than 100 students in a class. I just feel that you are in class and do what you want. [With an online class], you could just get everything done quickly and more efficiently."

As mentioned earlier, many revenue athletes have had positive experience with online courses. Although the misperception that online classes are easier than regular classes exists,

many revenue athletes are handling online classes very well and desire to take more. Because time constraints are the biggest concern, revenue athletes confirmed that online classes helped them to ease their scheduling demands. They appreciated not having to travel to and from campus and saving a lot of time.

E. There are Two Extremes: Revenue Athletes who Enjoy Taking Online Courses Versus Athletes who Try to Avoid Taking Online Courses

As stated before, there tend to be two extremes. Several revenue athletes who have had a bad initial experience in an online class stated that ”if it is a math class and you are not such a math person, you may want to have a teacher or somebody there actually to whom you can ask a question and you know: someone helps you out then and there.” Some athletes who have had good experiences with online classes expressed that they would prefer to attend the lecture in class. They explained: “Professors are always here … instead of sitting in front of your computer.”

Other athletes, in return, base their decision about whether or not to take a class online or in class on the workload involved with the class: “If it would be more work with the online class than the regular class, then I would say no. But if it is equal amount of work and it is the same thing with not much extra stuff, I would take an online class.”

The other extreme are revenue athletes who highly favor online classes: “I personally prefer [online classes] mainly because it saves you time. The time that it takes you to go to classes, coming back, being there … you can learn it on your pace.” “Yes, if it is offered, I take it online. I knew the class followed a clear process. I knew I could be better forcing myself online than I could have in the classroom.”

An athlete complained about maintaining the balance in classroom and in athletics and meeting all demands. He stated: “I feel like online classes is one of the only solutions …” Another comment was: “Online education would be a good opportunity for student-athletes and it would be great if more classes were offered, especially during the season.”

Research Question 3: What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?

Revenue and non-revenue athletes expressed that they would like to have (a) a combination of instruction, and (b) several options for different learning styles. Non-revenue athletes, in particular, asked for (c) more asynchronous technology and (d) an online representative for help. Revenue athletes (e) asked for smaller and shorter classes, and key informants would like to see the online environment (f) student-centered and (g) with a broad variety of characteristics/technology of course design.

Table 4.7 Learning Satisfaction

A. A Combination of Instruction
B. Several Options for Different Learning Styles
C. Non-Revenue Athletes Asked for More Asynchronous Technology
D. Non-Revenue Athletes Asked for an Online Representative for Help
E. Revenue Athletes Asked for Smaller and Shorter Classes
F. Student-Centered/Active Learning Environment
G. Characteristics/Technology of Course Design

A. A Combination of Instruction

Most of the athletes, in both revenue and non-revenue sports, expressed their desire for a mixture of online and in-class instruction. Thus, they hope to get the benefits of both delivery systems. The discussion groups came up with the idea of taking a 3-day class in which two days would be in a traditional classroom setting on days that would not conflict with their travel schedules, and any other work that is required would be online at their convenience. During the two days in the traditional classroom they would get immediate feedback about their questions, have someone hold them accountable to do the work, and have the interaction with the professor, classroom and material. Interaction was perceived to be a key element in learning by all staff members. The following quote summarizes their thoughts the best: "I think it would be very difficult to be completely college-educated online without any interaction … it is impossible to do everything online and learn it and to be good at it."

A combination was seen as an ideal solution. One non-revenue student stated that a mixture of both could enable "getting the freedom of managing the time how you want it, but also having someone having explained [your problems] to you; whenever needed." Non-revenue athletes emphasized how important the presence of a teacher is for the harder upper level classes. They agreed that "for some classes you need a teacher … to show stuff because you can't work it out by just looking at the examples … For upper-level classes, I'd prefer a teacher in the classroom." This idea was confirmed by another non-revenue athlete: "I need to listen to a teacher; so he shows me like heavy notes up that I can follow and understand it … I'd prefer to learn everything important in class." A different revenue athlete stated that "a mixture would be good … there are always pros and cons to traditional or to classes strictly online. You just have to find the middle ground, which is like somehow like the math emporium."

Virginia Tech's undergraduate math classes are delivered in an online environment. The Math Emporium is a facility with 500 computers, open 24-hours a day, seven days a week, enabling students to proceed through course material at their own pace, on their own schedule. Professors and tutors are on hand 14 hours a day to help with more difficult material. Students can receive that help by clicking a button or by displaying the red "help" cup on their computers.

The same student added that the Math Emporium allows him to receive the advantages of the classroom and the computers. In this innovative approach, class meetings would take place before athletes go out of town and could be used to communicate with the teacher and students. The student could go on his or her own pace on his or her own schedule and meet the academic deadlines. To be an efficient learning environment for students, the athlete suggested reducing the class to 50-100 computers and having one or two teachers available to help and to answer questions.

All athletes preferred having hard material explained by an actual person where they could get immediate feedback, to have someone hold them accountable to their work, and to have the interaction with professor, classroom and material. A revenue athlete stated that "if you don't understand, help is right there and you can just ask." In regard to the concerns discussed in Research question 1, factors like the academic background and self-motivation have to be kept in mind. Revenue athletes have complained about delayed feedback from their professors, along with feeling like they did not receive the quality of feedback they were looking for. This was similar to a non-revenue athlete's statement that "it is so much harder to say something in writing than verbally." At the same time athletes demanded to be permitted to learn at their own pace and have the convenience of choosing where and when they will learn.

Missing structure and a lack of due dates was perceived as a major challenge by all key informants. A suggestion made by one participant reflected everybody's recommendation: "Impose any kind of structure, specific deadlines so that procrastination can be minimized, if not avoided. Avoiding piling up and getting behind." As discussed earlier, continuous learning keeps students on track and allows intervention according to formative assessment.

B. Several Options for Different Learning Styles

An academic advisor expressed that a mix of in-class and online would work best in that "online […] allows a little bit more freedom in the weekly schedule."

The student-athletes would prefer to choose from several options. Their preference depends on the type of class. Offering a variety of choices is important to deal with the many different learning styles and learning backgrounds. Several options for different learning styles should be included. A revenue-athlete gave an insight into her learning routine: "Personally, I like visualizing and writing it down and taking the time to redo it." She stated that she prefers having an outline of notes with blanks provided where the teacher wants students to write out notes. Some group members agreed that by highlighting the main points, teachers make you be part of the class. Another student claimed that "if they give you all the notes and are just reading you the notes, there is no point to go to class." This goes back to motivation issues, as one academic advisor for revenue sports claimed that he is dealing with two extremes of athletes: some that are highly motivated and want to learn and others that do not care as much. A staff member expressed that it would be appropriate to give students some choice in what they want to be tested at the outcome. However, he believes that" [giving students more power] would be tough for a professor to grade in but it might be an option in addressing different students and

their learning skills." Non-revenue athletes have mentioned that they felt graded unfairly and that time allotted for some of their quizzes was inappropriate.

Therefore, learning satisfaction depends primarily on the individual and on the class itself. Hard classes or classes that require explanation might be best taught in a class with a teacher present whereas elective, easier courses, and courses taught during the season might be better online. Therefore, a mix of both formats appears to be the best solution for student-athletes.

Virginia Tech uses Blackboard, an online course management system commonly used for distributed learning purposes, enabling teachers of conventional face-to-face courses to provide learning resources and conduct course-related activities, such as discussions and testing, outside of normal class time. As such, Blackboard it is an asynchronous technology (Simonson et al, 2006). According to Allen & Seaman (2006, p. 4), Blackboard is a web-facilitated instructional delivery system which delivers between 1% and 29% percent of the course content online. Computer systems could be effectively supplemented by other instructional delivery systems, including audiotapes, videotapes, voice mail, or print material, enabling student-athletes to work independently. Learning with a mixture of delivery systems would encourage them the most and get them acquainted with several possibilities offered by Virginia Tech's Institute for Distance and Distributed Learning (IDDL). Student-athletes would like to have a broad variety of delivery systems including visual, audio, and asynchronous opportunities. At the same time, they would like to try some of the new technologies, such as Centra and Pod- and videocasting. A computer-based system was considered a helpful tool to cater to dual-careers students. The athletes emphasized that they were already familiar and comfortable with Blackboard and its

asynchronous delivery capabilities. Athletes expressed that "[we] like it how we are doing it now. [Let's] have a site like Blackboard where you can go to."

C. Non-Revenue Athletes Asked for More Asynchronous Technology

Student-athletes articulated clearly that they would like to work in an asynchronous environment. Non-revenue athletes particularly expressed their preference for prerecorded media. They focused on the fact that you would not have to attend the lecture and you could go back and watch the whole video. An athlete conveyed that, "[audio/video] could be a very good alternative too pretty much doing it alone without having to go to the classes. You could see what they are explaining on the board [and] reading would still be included." In an asynchronous learning environment, the learners are not required to be at the class at the same time. This 'different-time, different-place education' is considered useful for busy people who are unable to rearrange their schedules. Comments shared by non-revenue athletes were: "I could imagine listening to or watching a lecture or even do like practice. Like Spanish, you go to class, but you also have workbooks and stuff online." Another comment was "[With an] i Pod [it is] listening and watching; you can easily do this while traveling or at practice."

It is important that students understand the need to arrange a time within their weekly schedule to "attend" class on a regular basis. In regard to having a mix of online and in-class education, student-athletes would not be tempted to procrastinate. With a mixture of online and in-class instruction, however, student-athletes would be reminded of upcoming deadlines. A synchronous learning environment is same-time, different-place education. Synchronous class time is similar to the on-campus, face-to-face learning environment. All the members of the class are together at the same time.

D. Non-Revenue Athletes Asked for an Online Representative for Help

Non-revenue athletes in the first focus group liked the idea of an online synchronous chat. One athlete argued that he would like to have an online chat with a person he could contact and who would get back to him within hours. He described this kind of synchronous environment as, "you have a teacher in front of you [and] maintain the classroom environment. That's like being in a classroom, [but you are] sitting in front of your computer, and listening to it." However, other non-revenue athletes complained about a synchronous environment when it comes to group projects. A non-revenue athlete complained that, "I don't like the synchronous thing or chat because it is like kind of the group thing. It does not work as well because people have to work around your schedule. It is tougher with planning. Group projects are awesome when you are not in-season." Some revenue athletes, however, stated that they would like to include chats, instant messaging, and services where they could say: "let's meet at that time and take care of the stuff in that class."

E. Revenue Athletes Asked for Smaller and Shorter Classes

There were several revenue athletes who appreciated online education and asked for more online offerings. However, when the workload gets too much or the class is too difficult they tended to give up. They seemed to lack a good coping mechanism and preferred taking classes in a traditional classroom with shorter and smaller classes. Two comments shared by revenue athletes were: "I had one bad experience with an online class [where] one of my teachers made the class harder online. [The online class was] more demanding than it was in-class because, I guess, she felt like the test that you have to take wasn't enough." The athlete stated that he would prefer classes in a traditional classroom when there was work involved in an online class.

"The longer [the] class, the worse [it is]." Perhaps these athletes do not like long classes because they are not interested in the class and do not want to spend much time in it; conversely, their attention span after a long practice might play a role. They would prefer a smaller, traditional class so that they can get immediate help. An academic advisor confirmed that several athletes asked for the relatively few math sections that are offered in a traditional classroom. A key informant stressed the need to make class more interesting for students so that they would be more willing to put more effort into it. He believes that "you can artificially create an academic setting [however, he is] not sure how you are going to do that in a Math class, English class, or Physics class." SAASS offers a transitions course, specifically designed to assist student-athletes to make a successful academic, athletic and personal transition from high school to college. SAASS offers an array of other services that aim at the academic wellbeing of student-athletes.

Both revenue and non-revenue athletes appreciate the service provided by SAASS and plan to continue taking advantage of it. They see mandatory study hall as very helpful for the fist-year college student-athlete. Some of the revenue athletes perceive mandatory study hall to be indispensable to life. Not only as freshmen, but throughout their academic career, they reported that they were grateful for the possibilities they had and used tutors frequently, when needed. This support service is available on campus specifically for student-athletes and is essential considering that their busy schedule may prevent them from accessing services on campus. A non-revenue athlete described the services available to them as a blessing, stating that she would not know what to do without SAASS.

F. Student-Centered/Active Learning Environment

Two staff members suggested implementing different activities "that give them the chance to apply what they are learning." A staff member emphasized that it depends on someone's goal: "Do you want somebody to be able to just pare it back what you told to them or pare it back to what their textbook says? If that's what you want, you just need a series of PowerPoint lectures and have them read the textbook and they can give it right back to you." The interviewee continues: "at a college level you want [students to] understanding the information and then being able to apply or synthesize that information […] before you can get to that application and synthesis level with understanding, you have to have some interaction with the material and with other people. So that's the combination I think is appropriate in college."

G. Characteristics/Technology of Course Design

The key informants suggested a broad variety of technology would work well for student-athletes. They suggested prerecorded lectures because "you can just go back and watch it whenever you want; you still have the notes; so whichever way you prefer to learn, you can have it both."

iPod: As part of a university initiative to encourage creative uses of technology in education and campus life, Duke University distributed iPod devices, to over 1600 entering first-year students in August 2004 (Belanger, 2005). The Center for Instructional Technology at Duke University coordinated an evaluation of the academic use of iPods. Students in the Class of 2008 used their iPods for course content dissemination (portable access to course content such as lectures, songs, historical speeches, and foreign language content), classroom recording tools (capturing lectures, class discussions and verbal feedback), field recording tools (capturing field notes, interviews, environmental sounds and audio data), study support tools (repeated listening

and repetition of commercial and original audio content, such as music, audio books, rehearsals and vocabulary lists), and file storage and transfer (simple transfer or backup mechanisms, particularly for large multimedia files).The academic uses of the iPod at Duke University were considered successful (Belanger, 2005).

Several key informants considered Podcasting to be "a good idea and that way they could download [the] lecture, be at the gym and get two things done at once. iPods are pretty popular. I think it may be a few years, but I can see [this] happening."

Synchronous (Centra): Another staff member, in return, would like to integrate "social interaction through a synchronous chat." An advisor stated that chats and instant messaging are "getting pretty popular", simulating a classroom experience and enabling students to receive immediate feedback.

Blackboard: The interviewees reported a good experience with Blackboard, a web-facilitated course management system that is used on campus, in that "students are familiar with it and using it already."

Proposal Based on Experience with Football Players Taking Online Courses

Learning satisfaction may look different for football players. According to the advisor for football, an ideal classroom would be more than a media room setting. An environment to guarantee learning factors would be

> A small class size, between 15 and 20 […] It is mandatory. […] coaches are involved […]. Interaction is the key thing. It is a very interactive class; interaction between the players and the coaches, they discuss different things […]. Different learning styles: reading, lecturing, taking notes, answering questions, and then you have to relay it to the real world. […]. A lot of different media [should be included]. The combination of film

with lecturing attracts the interest more. Most student-athletes are such physical people, if you find a way to make it a physical experience.

Research Question 4: Does spending a significant amount of time away from campus make online education a better method of learning?

Themes that emerged during the discussions were (a) not missing out on information, (b) more freedom and flexibility, (c) online classes offer different options, (d) travel time can be used more efficiently, (e) skill set is necessary, and (f) dependency on specific sport. The key findings were that non-revenue athletes appreciated online courses because they made being away from campus easier and revenue athletes take advantage of options, yet travel is not perceived as a huge concern.

Table 4.8 Spending a Large Amount of Time Away From Campus

A. Not Missing out on Information
B. More Freedom and Flexibility
C. Online Classes Offer Different Options
D. Travel Time can be used more Efficiently
E. Skill Set is Necessary
F. Dependent on Specific Sport

A. Not Missing out on Content

Almost all informants perceived online education for sports like baseball and softball as a big advantage. This was best expressed by the following statement: "For those sports, [online

education] is almost a fundamental requirement. Those are the sports I sit there and scratch my head and go, 'how do you guys do this?' They are gone a week or something. That's like taking a vacation."

An interviewee stated that, "[he] will be happy to help those guys to be graduating. First of all, most of those kids don't get full scholarships. So they are paying to come to school, yet they are not even here." Graduation was mentioned as one of student-athletes' primary concerns regarding their dual career. "Missing a whole week several times a semester could definitely put these athletes at a disadvantage and make it hard for them to keep up academically." Another interviewee added that, "When you look at the sports that travel the most, they also tend to have the worst trouble with grades."

Non-revenue athletes appreciated online courses because they make being away from campus easier. They felt disadvantaged because they missed out on content when they are away from campus. Perceived benefits according to the participants included: having access to lectures, not missing material, not having to rely on another student's notes, not having to follow up with professors, and not scheduling a make-up exam. This, in return, could minimize their stress and save time when athletes return from their away game.

B. More Flexibility and Freedom

When it comes to traveling, the key informants perceived the freedom and flexibility inherent in an online environment to be a great opportunity. An athlete stated that, "It is a lot easier to bring just your computer on road trips rather than a bunch of books along with all of the other items you need." Student-athletes in both categories seemed to like the fact that material can be accessed online 24 hours a day, seven days a week, as expressed in the following

statements: “With online courses, there is some material always made available where you can have access to it…” “Especially with Blackboard you have access 24/7.”

C. Online Classes Offer Different Options

As mentioned earlier (Research question 3), online classes would offer student-athletes several options to help them keep on track. They would prefer a combination of options; they judged prerecorded video to be the best. With audio-video they could easily go back and listen to classes. An athlete reported taking two online classes where he had teachers offering prerecorded material, and he went through slides at his own pace. He stated that he liked the idea of listening, reading a little bit, and teaching himself.

D. Travel Time can be used more Effectively

Traveling was considered a waste of time. Because of that, an athlete noted,” I usually don’t take such a huge course load … and I take summer school so traveling does not really interfere.” A key interviewee considers online education to be a big asset for student-athletes with an intense travel schedule. “For them, an online class would probably be heaven. When they are on a bus, they can download the material, listen to it, do their homework, and when they get back here, they don’t have the stress of getting notes and finding out what they have missed while they were gone.”

Several athletes contended that through online education they are enabled to use the time away from campus efficiently and could actually get some work done during a multi-hour drive on a bus or in a hotel when they have spare time. They added that online education could assuage their worries about catching up once they return to campus. Both revenue and non-revenue

athletes liked the opportunity to work ahead in online classes and therefore remove some kinds of stress. The athletes see online courses during travel as a definite plus: "When we travel with the bus, we take like 9 hours that can easily be used for work. You can sit in the van and catch up with stuff, look at lecture notes; whereas in a class, you have lectures, you don't miss out on lectures and learn more as well." "What I like about online classes is that I could do the work before we travel or while we travel." "Online classes are easy if you manage your time correctly… you don't have to stress out yourself when you come back."

However, as mentioned earlier, the football players are not traveling as much as other teams. They perceived online education as an opportunity during their season and would appreciate more online course offerings. Also, more options for online learning should be available, as one revenue athlete claimed, "[The University] should offer classes online for more students. There should be several options to learning online. Not just reading a book and answering questions." An athlete stated that he traveled during spring break, and even if he forgot a folder, he could go online and have access to all the material. He stressed that "it is all there" and "it is not too hard trying to catch up."

However, access to the internet has been perceived as a barrier to online education. As such, an athlete claimed that, "[although] video and audio are nice and they work, for some lessons, having a book and … doing book assignments make it easier [and you do] not have to worry about the internet."

Basketball players, likely the revenue athletes traveling the most, might perceive online education during their heavy travel schedule in a different light. However, at the time the focus

group discussion meetings took place, the teams were traveling and unwilling to participate. More research on this group, in particular, is recommended.

D. Skill Set is Necessary

As previously mentioned, success in an online environment depends on the student's skills and dedication (research question 2). An academic advisor summarized that "It just comes down [to the question]: 'Am I a dedicated enough student, a motivated enough student, and do I have the time management skills and study skills to negotiate the way through my class?"

E. Dependent on Specific Sport

Staff members emphasized that each individual or team may perceive the need for online education related to travel differently. The advisor for the football players stated that "luckily our guys shouldn't be missing too many classes. Plus they have mandatory study hall." Another comment has been that, "Historically, basketball has been the most criticized sport. Their graduation rates have always been the center of attention. Basketball players spend a lot of time away from campus." An interviewee indicated that this year's NCAA tournament would be the week *after* spring break causing them to miss a whole week of class. When describing a sport like track, an advisor mentioned that for teams competing during summer, which requires them to be away from campus for several days, "Online education during summer time would be the most useful."

Trend of Online Education

The key informants believed that there would be an (a) an expansion of online education in general, (b) an increase of online offerings at Virginia Tech, and (c) an increase in comfort of

using internet as well in the degree of student satisfaction.

Table 4.9 Trend of Online Education

A. Expansion of Online Education in General
B. Virginia Polytechnic Institute and State University
C. Increase in Comfort of Using Internet and Degree of Student Satisfaction

A. Expansion of Online Education in General

The system administrator stated that "online classes are the way we are moving; we are having more and more professors who video-tape themselves [making it possible] to get that class on-demand." He believes that "there is going to be more technology in the classroom. You can do a lot of software stimulations …."

Some staff members think highly of the expansion of online education, but are skeptical about it: "I can see the trend *absolutely.* I don't know if it is necessarily good, but I think it is cost-effective." Another person noted, "I can see that growing, but with that growth it will bring some issues."

B. Virginia Polytechnic Institute and State University

Most of the SAASS staff members were familiar with the services, technologies, and online education opportunities at Virginia Tech. A staff member expressed that "online education is expanding; we started out in 1995, nowadays everybody here at the university has to use Blackboard just to communicate with the professor, to get to your class, to get your syllabus, notes, …" Another comment was "as we are becoming more and more a research institution, there is going to be a lot more online enrollments for the book stuff." Many interviewees agreed

that “if there is something that requires hands-on interaction, that is going to be in the classroom. For some courses, online instruction is impossible.”

Several support services are provided on campus. An academic advisor stated that “Virginia Tech, in general, has a really good environment” and alluded to the fact that “all students are required to have a computer when they come here.” Another comment was that “a lot of our students-athletes take advantage of our online opportunities that are offered here and enjoy the majority of their online classes.”

C. Increase in Comfort from Using the Internet and Student Satisfaction

A staff member confirmed that “we are starting to deal with a generation of students that are so easily computer literate. It is not any big deal to them.”

As trends in online education are followed, it may be telling to track the extent to which the cheating scandal at Florida State University may influence the future of the online education for student-athletes. An academic advisor stated that student-athletes could learn from this occurrence: “I think that student-athletes will learn a lesson in that they are warned to take the honor code seriously. Things like that can happen and athletes have to avoid getting in trouble by violating the honor code.” The consequences could be fatal to the university, not just for athletes on scholarship.

Discussion

The study was designed to compare perceptions, practices, and concerns of revenue and non-revenue athletes with respect to their (1) primary concerns related to their dual career, (2) perceptions of the benefits and barriers of online education, (3) perception of an ideal learning

environment, and (4) the relationship between spending a large amount of time away from campus and online education.

This study's findings show that there are more similarities than differences between revenue and non-revenue athletes. This was a surprising discovery when we consider prior literature about the specific sport played in college. Revenue sports have been associated with a decrease in a student-athlete's academic motivation and success (Suggs, 2003; Underwood, 1984) and low graduation rates (Snyder, 1996). Adler and Adler (1985) observed relationships between athletic participation and academic performance and found that a student-athlete's involvement in intercollegiate athletics led to academic detachment. In this study, student-athletes expressed that they wanted to learn effectively under their given circumstances.

Non-revenue athletes and revenue athletes seemed to want the best of both worlds, preferring the time and location convenience of online courses; however, they also want regular contact and interaction with faculty and other class members (for the social component). Therefore both liked a combination of instruction to have the benefits of both learning environments. In addition, they liked several options for different learning styles. Non-revenue athletes appeared to highly stress the importance of a solid education. The study showed that non-revenue athletes preferred taking the course in a traditional classroom in order to learn material and to get immediate feedback. Moreover, they asked for more online options during their sport's season to alleviate the rigors of intensive traveling. Revenues athletes appeared to appreciate online courses to ease their high demands on time and energy. At the same time, they highlighted the importance of having someone to give immediate help when needed.

Revenue athletes specifically mentioned their concern about having a dual career—namely the freshman experience of adapting to college life. This was also a major concern of the key informants who specifically addressed self-assessment (misperceptions about their own personalities and abilities).Even though revenue athletes may be more focused on athletics when coming to college, several revenue athletes agreed with the key informants that concerns are open to chance. Depending on what's going on in their lives, certain concerns take priority.

Oblinger and Oblinger (2005) see today's college students as members of the "Net Generation" (p. 15), a generation that has grown up with technology. The staff members agreed in that the students are comfortable using technology. Stokes (2003) found a significant relationship between the level of experience using the Web and student satisfaction. Student-athletes of both categories have stated that they feel comfortable using technology. The staff members assume that everybody has been exposed to a computer before they come to college; especially to an institute where possession of a computer is a requirement. The key informant interviewees and focus group participants also support Rodriguez et al.'s (2005) proposed advantages of online education, such as the aspects of flexibility of study-time, study location, less need to go to campus, and comfort with technology.

The key informants were in agreement with student-athletes of both types of sports for most of the themes. However, they expressed additional barriers to online education such as technological barriers, negative influences as a result of the professor (whether the professor was an enthusiast or a skeptic), and misperceptions on part of students that online education could be easier and more effective because of its self-paced nature.

Misconceptions reported by Hillstock (2005) included underestimating the time needed to prepare for faculty, ineffective use of appropriate technology, the misconception that class is easier. This study reports results that support these misconceptions. Misperceptions in this study also included student-athletes' expectation of a round-the-clock service and availability of staff and faculty. The key informants reflections that some professors are not willing to get online are similar to Prensky's (2001) analogy of native speakers and digital immigrants, descriptive of the generation gap. "The importance of the distinction is this: As digital immigrants learn – like all immigrants, some better than others – to adapt to their environment, they always retain, to some degree, their "accent," that is, their foot in the past (p. 2).

The ineffective use of technology by professors has been addressed by student-athletes' comments about bad experiences with the class set-up. DeBourgh (1999) suggested that certain pedagogical characteristics are associated with student satisfaction. These included providing clear expectations about course assignments, promptly recognizing and responding to students' questions, encouraging student participation in class sessions, using a variety of instructional techniques to help students gain a better understanding of course material, establishing mechanisms for students to access the instructor outside of class sessions, and providing timely feedback and return of students' written course work.

In addition, both non-revenue and revenue athletes confirmed the key informants' misperceptions that online classes are as easy, if not easier, as traditional classes and believed that they would not have to work as hard. Student-athletes also reported of falling behind in their classes. A revenue athlete expressed that, "online classes that I have taken have been a lot easier than normal classes. You put a little bit time to it…. It is a lot easier and they are less time-consuming." Others, however, claimed that the opposite is true in that "it seems easier, but it is

harder. It is easy when you stay on top of things. But when you fall behind, it is even harder than any other class."

Another misperception of student-athletes seemed to be the expectation of a round-the-clock service and availability of staff and faculty. As Prensky (2001) described the Digital Natives as people thriving on instant gratification and frequent rewards (p. 2), student-athletes appeared to almost expect class content help provided 24/7. This demand, and expectation, of special service seems to contradict student-athletes' claim on not wanting special treatment, such as in a form of purely online education.

Interviewees and focus group participants support Simonson et al.'s (2006) findings that online education can provide a more unbiased environment since fewer channels are available for personal judgment. However, a purely online educational program would not balance these requirements. Student-athletes, who are already considered to be non-traditional students (e.g., Gaston, 2003; Lorenzen & Lucas, 2003), need the face-to-face interaction and experience of traditional college life. A key informant expressed that, "The point about going to college is having a face-to-face interaction with professors."

In addition, student-athletes asked for more delivery method options. This involves questions of instructional effectiveness and economic feasibility. They asked for more online course offerings which could be limited by money, time, energy, and effort as well as complexity of subject matter, staff development and training.

Overall the five key informants could see online classes as a possible supplement to traditional learning, as one staff member best phrased their perceptions: "I think they can work both ways, both positive and negative on the student-athlete. It really depends on the motivation

and willingness to sort of plan and be ready to do it." The key informants do not perceive online education to be any better or worse than the traditional classroom setting for student-athletes. This supports Clark' finding (1983) that there is no clear or verified process for determining whether face-to-face instruction, distance instruction, or a combination of the two is best (Clark, 1983; Simonson et al., 1996). Garrison (1990) argues for the appropriate, conservative use of interactive communication technologies in education, which, be it at a distance or not, is dependent on two-way communication. According to the key informants and student-athletes, interaction with professor, classroom and material plays an essential role, as discussed in Research question 3.

Implication

Online education does take a sense of responsibility, self-motivation and requires students to take control of their own learning. The staff members of the Student-Athlete Academic Support Service (SAASS) stress the need for time management and planning skills. As a result of their hectic lifestyle, student-athletes are not always able to control and effectively regulate their own learning, which makes it necessary to effectively use the existing support services and extend those to the students' changing needs as well as NCAA requirements.

First-year student-athletes who have a hard time adjusting to college life are encouraged to gain the necessary skills through mandatory study hall and other services offered by SAASS. These services should help them to avoid bad initial experience in online courses. In most cases, students did not have any training for online classes. Student-athletes mentioned time management as a primary concern; online education seemed to add another layer of complexity on their planning skills. Some key informants believed that for freshmen, online classes may not

be the best format: “Coming from high school and never having had any online classes, some [freshmen] are just scared of fear of the unknown.”

This makes it necessary to establish a productive work environment, use resources like study hall and tutors effectively, and realistically assess one’s own abilities. One concern of student-athletes about having two careers, as mentioned earlier, includes self-assessment and misperceptions about their own personality and abilities. Being a hard-working and successful athlete does not necessarily mean the same for academics, and vice versa. In order to produce the best learning outcome and learning satisfaction, all key informants suggested strict deadlines for online classes to prevent procrastination and/or students getting off track. Some of the staff members require their students to plan out (with a calendar) up-front how they want to take the class in order to avoid the temptation to let the work pile up at the end of the semester.

SAASS is an organization which is already in place and well-accepted by student-athletes. It plays an important role in holding athletes accountable and helping them with their *muddiest point,* meaning to identify material which is least understood. Along with the wide array of tutors, SAASS can maximize the learning effects of student-athletes. Strict deadlines, either required by the teacher or set by oneself, provide continuous feedback via progress reports that are already employed for this purpose. Student-athletes require a kind of formative assessment, not necessarily to be used for grading purposes, allowing professors to provide feedback on students’ work throughout the course. Athletes should be able to understand that not practicing on a regular basis will result in weak performance.

Continuous learning should be implemented during study hall time, which should be used effectively, as exemplified by the following statements: “Student-athletes can use study hall whenever they want. I mean they have to be in study hall, but that does not necessarily have to

mean that they have to be working …Some use it effectively, some don't. So study hall can be helpful, but is not always. It really depends on how the student wants to use it." With their time management issues, student-athletes could be monitored to ensure that they use their mandatory study time wisely and do not waste it. Getting work done in time would result in formative assessment feedback.

Different Classrooms for Different Types of Athletes

Some key informants assumed that, although non-revenue athletes and revenue athletes may see online education in a positive light, their reactions might be different when student-athletes realize that an online class is not an easy load. They believed that non-revenue students would work hard whereas some revenue athletes might not be willing and ready to follow through. One staff member believes that there are two extremes with two different means:

> I think when you look at non-revenue athletes, they may see taking online classes as a good way for them to get the material, learn it, get ahead, and therefore allow them some flexibility in their time. [On the contrary,] I see revenue athletes, or in this case, the less motivated students…to get through a class where they don't have to attend it. It is a different perception. 'I don't have to go to class. Oh, that is great. I can get 3 credits and never attend class. Oh, I like that; that's good.'

Some revenue-athletes, however, stated that they would rather take a hard class in an online environment than taking an easier one and having to go to campus. A revenue athlete noted, "I have taken some that were even harder, but I like the challenge. I'd rather be challenged and not having to go to class than having it easier and having to go to class … one was actually a real class where I probably wrote maybe 40 to 50 pages. I had a lot of readings and exams. I worked very hard, put a lot of effort into it and was able to get an A…"

This assumption of having two extremes of revenue athletes was confirmed by several responses of student-athletes: at the one end there are extremely motivated student-athletes, and

at the other end there are athletes who do not care as much about academics. This was also encountered during the focus group discussions. In fact, three different groups could be identified when considering the 'middle road':

1) The first group enjoyed taking online classes. Athletes stated that they would even take harder classes, and be challenged. They would prefer working hard in classes online rather than going to class and having an easier class. With online classes, they reported being more productive and being more time-efficient. This was confirmed by one staff member expressing that "they'd rather work their butt off for not having to go to class." They like to be told what to do, they communicate well, they appreciate taking online classes, and they have the skills to succeed in them; however this represents the minority of athletes in these focus group discussions.

2) This group of athletes who have had bad initial online learning experience and would prefer to take any further classes in a traditional setting. Even if these athletes have reported good experiences with online classes and appreciate the convenience of not having to travel to campus, they would rather have a teacher explaining things, have someone holding them accountable, and be able to ask questions directly. Often, these athletes lack the skills for self-study and need more feedback and help by people directly.

3) The third group comprises student-athletes who appreciate online education and ask for more online offerings. They mention that they see it as the only solution; however when the workload gets too much or the class gets too difficult, they tend to give up and feel overwhelmed. If they think it is unfair or more work, they'd rather take the easier class offered in a traditional classroom.

The preceding discussion indicates that there tend to be two extremes and that success or failure in an online class depends on each individual. A few revenue athletes expressed that "We have been brought up in classes and in classrooms and that's what we are familiar with." Other athletes claimed that there would be no way around technology. Yet, they were unclear whether this would be a positive or negative thing. A revenue athlete stated: "I can kind of see that everything is moving to online. I know that you could get full-college degrees online. It is like a paradigm switch." Two revenue athletes perceived online classes as the only solution in the future. Other revenue athletes added that online education may not be a controversial topic at the moment, but it might possibly in the future. They referred to the recent cheating scandal involving revenue athletes at Florida State University and online classes. They believe that the integration of technology in the world is expanding and student-athletes are making use of it more and more. A revenue athlete added that" student-athletes trying to take online classes as an opportunity to cheat" would definitely produce stereotypes. He stated that "I just feel that does not represent our student-athletes. It is just a selected group."

Future

Throughout its history, the NCAA has had hundreds of cases of teams cheating in order to remain athletically eligible (Wolverton, 2006). In 2007, the NCAA announced that 112 Division I teams would be penalized for failing to meet minimum academic performance standards, specifically the APR cutoff score of 925 ("Knight Commission Urges Presidents," 2007). The pressure to meet academic standards may lead to more cheating. The recent cheating scandal at Florida State University did not reflect positively on online education ("Florida State Inquiry," 2007). This incident has sparked a discussion about cheating in online classes and honor code violations between two of the key informant interviewees.

With new technology emerging daily and the growing need for more flexibility in scheduling, the trend seems to be towards implementing more online classes in university settings. The purpose of online education should be to create and widen access to education, improve quality, and meet requirements of those unable to succeed in the traditional classroom.

Research has shown that there is a relationship between the level of comfort using the Internet and the degree of student satisfaction (Loyd & Gressard, 1984; Stokes 2003; Lee & Witta, 2001). Online education is on the rise and has become the format of choice for many universities (Allen & Seaman, 2006). Oblinger and Oblinger (2005) describe today's generations as follows: "One of the most striking attributes is the attitude about the Internet. For the Net Gen, the Internet is like oxygen; they can't imagine being able to live without it" (p. 20). It is an almost instinctive assumption to believe that Net Gen students will want to use instructional technology heavily in their education as they certainly do in their personal lives.

CHAPTER 5

Summary and Recommendations

Student-athletes constantly balance their athletic, academic, and social roles. This distinguishes them from the normal student body. Their dual career can easily be overwhelming. Athletes are required to accommodate heavy practice and travel schedules, national competition, pre- and post practice needs, and mandatory meetings. At the same time, school requires student-athletes to take a full class schedule. Missing classes can be disruptive to the flow of classes and material, lecture notes might not be accessible before the next class session, and review sessions might be inaccessible.

Online education is considered to be one way to provide a personalized, portable, on-demand learning environment that is flexible regarding both time and location, without travel to and from campus, self-paced, and at the learner's convenience. The purpose of this study was to determine the perceptions, practices, and concerns about online education among student-athletes at Virginia Tech. Understanding student-athletes' needs and wants could help to promote high quality online course development. It may also increase the likelihood of positive online learning experiences.

Focus group discussions, key informant interviews, and a demographic questionnaire were used to collect data. Student-athletes from all varsity teams at Virginia Tech were purposively selected for two revenue sports sessions and two non-revenue sports sessions. Five key informant interviews were conducted with personnel in the athletic department at Virginia Tech. The focus group questions and key informant interviews correspond to each research question. The primary research questions for this study compare revenue and non-revenue

athletes' perceptions with respect to 1) primary concerns related to their dual career, 2) perceptions of benefits and barriers of online education, 3) ideal learning environment, and 4) the relationship between spending a large amount of time away from campus and online education.

Summary of Research Question 1: What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?

Primary concerns perceived by both revenue and non-revenue athletes were: time management and time constraints; balancing their dual career; fatigue and exhaustion; catching up with academic studies as a result of intense travel; dealing with preconceived notions others may have, and maintaining a healthy lifestyle. Concerns specifically mentioned by revenue athletes were the freshmen experience and adaptation to college life, as well as focus and self-motivation. The primary concern for non-revenue athletes seemed to be catching up with academic studies as a result of intense travel. Though time constraints are a primary pressure on the athletes, the inconvenience of spending time away from campus (and therefore missing out on information that other students in class receive) seems to be of even greater concern. The football players in the revenue groups noted that intense travel would not apply to them, as they may only miss 1-2 days of class. In addition, freshmen football players usually do not travel at all.

It appeared that athletic responsibilities are primarily to blame for student-athletes struggling with time management. Student-athletes in both categories have many competing demands for their time. Blocks of time are reserved specifically for practice. Frequently, class offerings overlap with practice time. Time management appeared to be *the* major concern of revenue athletes. In fact, the time aspect seemed to have a major influence on all other concerns

and conflicts mentioned. Revenue athletes have an even more demanding schedule of athletic commitments than non-revenue athletes.

Revenue athletes, in particular, were concerned about the adaptation to college life as a freshman. They felt constant pressure from coaches, the media, thousands of sports fans, and consequently experienced anxiety. Athletes reported that they felt overwhelmed during their first year in college, because of a new environment and the high demands on time and energy. Most of the revenue athletes come to college through a scholarship, and do not think about graduation or earning a degree. In addition, high school preparation for college is insufficient. Upper classmen are not immune to problems with focus and self-motivation. It was noted by revenue and non-revenue athletes that classes must be scheduled around athletics. Admittedly, when big games come up, scholastic responsibilities will most commonly (and stereotypically) take a back seat, as reported by several revenue athletes. In addition, many revenue athletes seem to be highly motivated by what interests them most – their sport, and would rather spend time improving their athletic skills than working on academics.

Non-revenue athletes expressed that they felt like they have two full-time jobs. They emphasized their academic responsibilities at least the same, if not more, than their athletic responsibilities. Some student-athletes wanted a solid education, in case they failed to be successful with their sport professionally. Many athletes stress how important it is for them to progress towards their degree. However, athletes who would like to attain a higher degree, must also deal with the high demands of their coaches, the physical drain, and the lack of free time. Fatigue was another main concern cited by both groups. Being tired from practice, workouts, and other athletic demands has hindered them at some point in their academics. They fall asleep,

cannot concentrate enough to study, and experience many other fatigue-related behaviors. At the same time, student-athletes want to be social. Athletes mentioned that they would rather spend time with friends or catch up on sleep, than try to earn an "A" in class.

In general, student-athletes were aware of existing stereotypes about them. Athletes in these groups believed that these stereotypes were not a large problem at Virginia Tech, and might be more of a concern for revenue athletes in general. Non-revenue athletes mentioned that many professors and peers have misperceptions of what the time commitment is involved when with being a student-athlete. Most of their classmates seemed to consider non-revenue athletes to be more traditional students - playing sports as a hobby. Revenue athletes, however, were concerned about looks they got in their classes and the disrespect they experienced from many classmates. Student-athletes agreed that they would be stereotyped if they took classes purely online, because any kind of 'special' treatment would add to preconceived notions about student-athletes.

Maintaining a healthy diet was the concern of one revenue athlete. The concept of a healthy lifestyle was noted by both groups. They see a connection between getting enough sleep and achieving an optimal level of energy.

Summary of Research Question 2: What are student-athletes' perceptions of the benefits and barriers of online education?

Perceived benefits

Both revenue and non-revenue student-athletes liked the freedom and flexibility to complete their school work whenever and wherever they want. They contended that they were

not bound to come to campus at a certain time, avoided common irritants such as driving to class or finding a parking space. All athletes appreciated that they could manage their time better and fit their schedule around their athletic commitments using online education. If they felt tired or unmotivated to work, they could complete their homework or study at a more convenient time.

Non-revenue athletes, in particular, claimed that they could get work done earlier, which removed a lot of stress and gave them more opportunities to spend time on other commitments. They perceived the opportunity to take online classes during their season when they are required to miss a lot of classes to be the major benefit. The football players in the focus groups stated that they were not traveling as much and would not miss class as much; however, the revenue athletes emphasized that taking online classes would be a significant benefit if they were traveling a lot. One revenue athlete stated that he will take advantage of his online class during spring break when he would be able to access Blackboard at any time, and be able to communicate with his professor. He stated that he had previously contacted the professor who, in return, indicated that he would provide help. At the same time, however, student-athletes expect help available to them 24 hours a day on 7 days a week.

With time constraints as the biggest concern, the majority of revenue athletes perceived online education to be a great help in managing their time. They mentioned that online education helps them save a lot of time and removes a large weight from their backs. They emphasized the diminished need to travel to or from campus and the time gained by taking online courses which provide them more time to focus on the things they enjoy (often, their sport). Though all student-athletes stated that they took advantage of online classes, the revenue athletes seemed to appreciate them more and were more willing to take more online classes to help ease their schedule.

Alleviating preconceived notions by introducing more objectivity was of minor importance. These results were anticipated because Virginia Tech was perceived to have a fair campus. Revenue athletes emphasized that online education provided a degree of anonymity, which would moderate any stereotypes. Also, non-revenue athletes believed that stereotypes would be moderated to some extent, as long as athletes did not rely solely on online education.

Several participants in the revenue athlete groups stated that there would be no way to evade technology and that it is essential to stay up-to-date with technological change. They believed that the trend will be more towards online education. Participants in all four discussion groups reported that they felt comfortable using technology and, as such, valued the fact that they had access to class material 24 hours a day, contingent on internet accessibility.

Perceived disadvantages

All student-athletes, regardless of type of sport, considered missing structure, lack of deadlines, lack of accountability, limited interaction with the professor, and the need to have certain management and planning skills to be a barrier to online education. Online courses were perceived to be challenging as a result of missing structure and lack of deadlines. Several student-athletes complained about the set-up of some of their online classes and reported some bad experiences they have had in their online courses. Non-revenue athletes, in particular, complained about the set-up of the math classes. Others did not like the way assessment took place in an online environment. A non-revenue student was unhappy with his online group project and considered any kind of synchronous environment to be a hindrance when in-season. Group members did not like having to work around the athlete's time schedule.

The biggest challenge perceived by almost all student-athletes was staying on top of their work. As much as they appreciated the convenience and flexibility of taking online classes, they reported of falling behind and dealing with the consequences of procrastination. This was contingent upon the lack of set due dates or the lack of quality of overall communication. This leads to student-athletes' complaints about the limited interaction with their teachers or professors. Being separated by space and time is a challenge for both teacher and learners because it limits channels of communication. The fact that there are no face-to-face conversations inhibits free-flowing interaction, especially feedback. Teaching usually involves spontaneous give-and-take, thus, participants may take interaction for granted. Since sensory channels are reduced, there are fewer opportunities for informal conversation. Both revenue and non-revenue athletes emphasized the limited, or lack, of interaction with their professor to be a hindrance. Several students alluded to the fact that they prefer taking classes in a traditional setting because they needed a teacher to explain the more difficult content and wanted immediate feedback if questions arise. For upper level classes, non-revenue athletes would prefer learning by watching and listening instead of having to teach themselves. Athletes were concerned about having to write an email if they had a question, not getting the high quality feedback they wanted, or spending extra time meeting with the professor during office hours.

As opposed to a traditional class, online learners do not see their teacher on a regular basis. Nobody holds them accountable per se; it is the students who are responsible for their schedule and must keep up with the work, work towards a goal (e.g., getting an A in a class), find time to do assignments and thus stay focused. Some non-revenue athletes reported that being in an online class does not remind them of their responsibilities in the same way that attending a traditional class does. In the same way, revenue athletes felt that they needed

someone like their coaches who they see every day, to check on them and hold them accountable. All student-athletes were aware that they need time management and planning skills to be successful in an online environment. Online learning requires strong *self-motivation*, *self-discipline* and assertiveness. The online learner spends most of his or her time in front of the computer which is not analogous to a traditional classroom. They are their "own" teacher and have to be able to set their own deadlines and short-term goals. Assuming responsibility for an online class seemed to be an obstacle if the subject matter has no relevance for them or entailed more work than the same class in a classroom setting, especially for revenue athletes.

First-year student-athletes who have a hard time in adjusting to college life are particularly encouraged to gain these skills through mandatory study hall and other services offered by the SAASS to avoid bad initial experiences with online courses. In most cases, students did not have any training for online classes. A highly motivated revenue athlete reported using the following strategies: planning out a whole semester in advance, marking all due dates, and following through. These strategies make it necessary to be proactive and build a good relationship with the professor. In addition, he stressed that in an online class you need to have the desire to work hard, to show interest in class, and try not to live up to any stereotypes of student-athletes. He considered self-discipline to be the most important skill in teaching oneself.

In addition, a non-revenue athlete mentioned the lack of consistent internet access when she is on the road. She was not able to do any work during games or in the hotel. The challenge, however, is to know: Do student-athletes want to? Do they need to? That is where self-motivation and self-assessment (misconceptions about one's abilities and skills) come in. Most

athletes, revenue athletes in particular, perceived online classes to be as easy as traditional classes and believed that they would not have to work as hard.

However, when the class load was perceived to be too difficult to manage, non-revenue athletes seemed to be willing to work hard, whereas revenue athletes, when feeling too overwhelmed, seemed to lack the skills or perseverance to follow through. Some revenue athletes, however, stated that they would rather take a hard class in an online environment than taking an easier one and having to go to campus. So there tend to be two extremes and success or failure in an online class depends on each individual.

Athletes claimed that there is not a way around online education and anticipated that there would be an increase in online class offerings, yet were unclear whether this development was a positive or negative thing. Two revenue athletes perceived online classes to be the only solution to their problems in the future. Other revenue athletes added that they thought online education may not be a controversial topic at the moment, but it might possibly be one in the future. They referred to the recent cheating scandal involving revenue athletes at Florida State University in online classes. They think that the implementation of technology in the world is expanding and that student-athletes are using it more and more.

Overall, participants have had positive experience with online courses. The non-revenue athletes preferred taking classes in a traditional classroom, if they would like to learn material. They would prefer to take online classes when they travel, for time issues, or easy credit. There seemed to be two extremes for the revenue athletes: athletes who enjoy taking online courses versus students who try to avoid taking online courses.

Summary of Research Question 3: What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?

Most of the athletes, in both revenue and non-revenue sports, expressed their desire for a mixture of online and in-class instruction. With this system, they were able to get the benefits of both delivery systems. The discussion groups came up with the idea of a 3-day class, wherein two days would be used for a traditional classroom setting on days that would not conflict with their travel schedules, and on the third day any other work that is required should be online at their own convenience. Non-revenue athletes emphasized how important the presence of a teacher is for the more difficult upper level classes. All athletes preferred having hard material explained by an actual person where they could get immediate feedback, have someone hold them accountable and have the interaction with the professor, classroom and material.

At the same time athletes demanded to be permitted to learn at their own pace and own convenience. A computer-based system was considered to be a perfect tool to cater to athletes' dual-careers. The athletes emphasized that they were comfortable with Blackboard and its asynchronous delivery capabilities. Computer systems could be effectively supplemented by other instructional delivery methods, including audio- and videotapes, voice mail, or print material enabling student-athletes to work independently. Learning with a mixture of delivery systems would encourage them and help get them acquainted with several possibilities offered by the Institute for Distance and Distributed Learning. They would like to try some of the new technologies, such as Centra and Pod-and videocasting.

In an asynchronous learning environment, the learners are not required to be at the class at the same time; a synchronous learning environment provides same-time, different-place

education. A non-revenue athlete liked the idea of a synchronous chat in the form of an online representative. However, other non-revenue athletes complained about synchronous environments when it comes to group projects.

The student-athletes would prefer several options to choose from. Their choice depends on the type of class. Offering a variety of choices is important when dealing with the various learning styles and learning backgrounds. This goes back to motivation issues, as one academic advisor for revenue sports claimed that he is dealing with two extremes of athletes: some that are highly motivated and want to learn and others that do not care as much. Therefore, learning satisfaction depends mostly on the individual and on the class itself. Hard classes or classes that require explanation might be best taught in a traditional classroom setting, whereas electives, easier courses, and courses taught in-season might be better online. Therefore, a mix of both formats might help them to balance their situation. There were several revenue athletes who appreciated online education and asked for more online offerings. However, when the workload gets too much or the class is too difficult they tended to give up. They seemed to lack a good coping mechanism and prefer taking short classes in a traditional classroom with smaller classes.

Student-Athlete Academic Support Service (SAASS)

Both revenue and non-revenue athletes appreciate the services provided by SAASS and will continue to take advantage of it. They see mandatory study hall to be helpful for the fist-year collegiate student-athlete. Some of the revenue athletes perceived mandatory study hall to be indispensable to life throughout their academic careers. They reported that they were grateful for the possibilities they have and used tutors frequently. This is an essential support service

available on campus specifically for student-athletes. It is provided for them because their busy schedule may prevent them from accessing services on campus.

Summary of Research Question 4: Does spending a significant amount of time away from campus make online education a better method of learning?

Non-revenue athletes appreciated online courses because they make being away from campus easier. They perceived having online classes to be an accommodating form of education when they are on the road. They felt disadvantaged when they missed out on content because they value education and appreciated any help they could get when they were away from campus. Online classes offered them several options to help them stay on track. They preferred a combination of options, although the felt that prerecorded video was the best. Traveling was considered to be a waste of time. Several athletes contended that through online education they were enabled to use the time away from campus efficiently and could actually get some work done during a multi-hour drive on a bus or in a hotel when they have spare time. They added that online education could assuage their worries about catching up once they return to campus.

Both revenue and non-revenue athletes liked the opportunity to work ahead in online classes and therefore remove some kinds of stress. The athletes saw online courses during intense travel as a benefit. However, as mentioned earlier, the football players do not travel as much as other teams. They perceived online education to be a great alternative in-season and would appreciate more online course offerings. Basketball players, the revenue athletes traveling the most, might perceive online education during their heavy travel schedule differently. However, during the time of the focus group discussion meetings, the teams were traveling and unwilling to participate.

Recommendations

In respect to the findings of this study, two recommendations can be made: (a) providing more flexibility for student-athletes and (b) developing a model for student-athletes based on the results of this study.

A. Provide More Flexibility for Student-Athletes

The three main problems for student-athletes were identified as: 1) having an overwhelming dual career, 2) having to deal with misconceptions and stereotypes, and 3) being at a disadvantage through the rigors of extensive travel. Based on this study's findings, I conclude that online education: 1) can be a beneficial, 2) can provide a less biased environment, and 3) can be an attractive option for student-athletes who spend a large amount of time away from campus. It was of interest to determine the extent that these problems applied to student-athletes in this study and what could be done to improve the situation.

1) Student-athletes have a busy lifestyle balancing their dual careers and thus have high demands on their time and energy (Gaston, 2003; Lorenzen & Lucas, 2003; Sedlacek & Adams-Gaston, 1992).

My findings supported the notion that student-athletes' dual careers could easily become overwhelming. Time management and coping with both demands were two of the biggest concerns of both revenue and non-revenue athletes. They reported having high demands on time and energy, being constantly fatigued, and that their dual career consumed most of their free time. Freshmen felt particularly overwhelmed attempting to adapt to collegiate and athletic demands. Student-athletes emphasized that they wanted to excel in both careers. Revenue and

non-revenue athletes appreciated the flexibility and convenience of an online learning environment.

In conclusion, as there are positive and negative sides of online education, the effectiveness of an online class depends on several factors: student-athlete motivation and willingness to focus, and on the goals, objectives, and type of class on the instructor's side. Overall, having online classes available could be a beneficial alternative for student-athletes.

2) Oftentimes, student-athletes are confronted with prejudicial attitudes, stereotypes, and misconceptions by their peers, faculty, and administrators (Etzel et al., 1996; Lorenzen & Lucas, 2003).

In this study, stereotyping was not perceived to be a big deal on Virginia Tech's campus. Several non-revenue athletes reported misperceptions that faculty and peers have about being an athlete. Some revenue athletes admitted that they were living up to the stereotype at certain times. Key informants claimed that stereotypes arise because of events in the past. The recent NCAA regulations, admission changes, and improved support services may have had a big impact on student-athletes' rising graduation rates. However, the recent cheating scandal involving student-athletes at Florida State University might indicate that these graduation rates are inflated by dishonest means, as discussed by several revenue-athletes.

I believe that online education can be a more unbiased environment since fewer channels are available for personal judgment. Because the nature of collegiate athletics often isolates student-athletes from the larger campus community, students tend to be more susceptible to stereotyping (Hamilton & Trolier, 1986). Therefore, removing student-athletes from the

classroom might intensify any existing prejudices. Any kind of special treatment would be counter-productive and alienate them even more from the campus community. Instead, integrating them more into campus life would help alleviate these concerns with interaction and socialization with other college students.

3) Rhatingan (1984) stated that a collegiate basketball player must contend, along with her/his academic pursuits, with approximately eight away games each spring.

Traveling away from campus for several days puts student-athletes at a disadvantage. Student-athletes in this study stated that they would like to have more online opportunities to help them cope with their travel regimen. Non-revenue athletes claimed to appreciate online education in-season because they did not want to miss out on class content. Revenue athletes in this study did not travel as much, and the revenue-athletes who *did* travel were unable to participate in the focus group discussions because of their tight schedule.

As a result, offering more online classes or providing more materials online for students away from campus would provide great benefit for student-athletes. With today's advanced technology there are many different delivery systems that could be integrated to enrich the learning environment.

B. Develop a Model for Student-Athletes

Student-athletes expressed the opinion that they would like to have a mix of in-class instruction and online education. They prefer to have a few traditional class meetings weekly in order to get guidance and direction. In addition, they would like to take advantage of an online learning environment. Even though technology plays a key role in the delivery of distance

education, teachers must remain focused on instructional outcomes. Effective online education is focused on the needs of the learners, the requirements of the content, and the constraints faced by the teacher before selecting a delivery system. Generally, this systematic approach will result in a mix of media, each serving a specific purpose (EODE, 2007; Simonson et al., 2006). An example of such a mix of media for student-athletes may be the combination of a strong print component, a synchronous chat, computer conferencing, and asynchronous elements.

A *strong print* component that can provide much of the basic instructional content is often available in the form of a course text, along with readings, and day-to-day schedules. These elements will assist the students who prefer to learn visually. Athletes could easily read during a multi-hour drive on the bus.

A *synchronous chat* (Centra) could provide real time face-to-face interaction and therefore simulate an in-class environment. This option requires a set time that would not interfere with student-athletes' schedules. A synchronous chat in the form of an online representative being available 24 hours each day might be another possibility.

Computer conferencing can be used to continue the discussion when real time interaction is not required. The virtual classroom is open 24 hours a day, seven days each week, allowing students the flexibility to schedule their learning time around their other commitments. Students are already familiar with the use of the course management system Blackboard. For example electronic mail can be used to send messages, assignment feedback, and other targeted communication to one or more class members. This communication could also increase interaction among students. E-mail can be used to distribute assignments, last minute announcements, to receive student assignments, and to provide timely feedback.

Asynchronous technology enables the learners to work whenever and wherever they want. Pre-recorded audio or videotapes would be of great benefit to athletes, especially during times of intense travel. In addition, pre-recorded media can be used to present class lectures and visually-oriented content.

The teacher needs to carefully select from among the technological options. The goal is to build a mix of instructional media to meet the needs of the learner in a manner that is instructionally effective and economically feasible.

Recommendations for Student-Athletes and Instructors

EODE (2007) lists challenges that can be related to the student-athlete. These include:

Becoming and staying responsible for themselves: High motivation is required to complete online courses because the day-to-day contact with teachers and other students is typically lacking. Teachers can help motivate student-athletes by providing consistent and timely feedback, encouraging discussion among students, being well prepared for class, and by encouraging and reinforcing effective student study habits. Student-athletes also can benefit from the specialized student-athlete academic support services on campus including tutoring, mentoring, mandatory study hall, and advice from an academic advisor (Lorenzen & Lucas, 2003).

Owning one's strengths, desires, skills, and needs is another challenge for students who need to recognize their strengths and limitations. One concern specifically mentioned by key informant interviews was self-assessment (misconceptions about each athletes own personality and abilities). Student-athletes need to understand their learning goals and objectives. The

instructor can help distant students to explore their strengths/limitations and their learning goals/objectives by assuming a facilitative role in the learning process. Providing opportunities for students to share their personal learning goals and objectives for a course helps to make learning more meaningful and increases motivation. Student-athletes experience victory and defeat many times and seem to know their strengths, weaknesses, skills, and needs (Crowley, 2006).

Furthermore, maintaining and increasing *self-esteem* is essential, as online students may be afraid of their ability to do well in a course. They are balancing many responsibilities including employment and other commitments, such as their sports. Often their involvement in athletics is unknown to those they work with and ignored by peers and faculty, who tend to stereotype student-athletes as *dumb jocks* and/or as pampered individuals (Etzel et al., 1996). Student performance in their academic endeavors is enhanced if the athletes receive support from coaches, teammates, and the athletic department (Lorenzen & Lucas, 2003).

Relating to others is important because students often learn most effectively when they have the opportunity to interact with other students. Interaction among students typically leads to group problem solving. When students are unable to meet together, appropriate interactive technology such as e-mail should be provided to encourage small group and individual communication. Assignments in which students work together and then report back or present to the class as a whole encourage student-to-student interaction. (Another option for student-athletes could be to have a teacher on their road trips who can lecture student-athletes that take similar classes. This might also help them to distract from pre-competition anxiety).

Another challenge is *clarifying what is learned.* Online students need to reflect on what they are learning. They need to examine their existing knowledge frameworks and how these are being added to or changed by incoming information. Examinations, papers, and class presentations provide opportunities for students and teachers to evaluate learning. These activities would allow student-athletes to examine what they have learned in the time they have been gone.

Dealing with content and relating content to examples can also enhance student learning. Instructors tend to teach using examples that were used when they received their training. For online learning to be effective, however, instructors must discover examples that are relevant to their online students. Meaningfulness is especially important for some of the revenue athletes as specifically mentioned by an academic advisor for football. This includes encouraging students to find or develop examples that are relevant to them or their community. Today's student-athletes can also be characterized as being a digital natives; therefore, activities and assignments should be directed to their interests and learning styles.

Athletes do not need fancy instructional technology to make instruction effective and learning successful because they do not have time to deal with exploring new technologies. They need a simple and effective alternative solution to help balance their dual career. While educational technologies provide increasing opportunities for interactive exploration in a learning environment, crucial questions remain: Will student-athletes be able to exercise control and effectively regulate their own learning in flexible learning systems? Will they be motivated enough to really explore? Theory and research suggest that learners can and will, if the instructional systems are well-designed and if the learners are adequately prepared (Kinzie, 1990, p. 5).

Meeting the instructional needs of students is the cornerstone of every effective online education program, and the test by which all efforts in the field are judged. Regardless of the educational context, the primary role of the student is to learn. This is a daunting task under the best of circumstances, requiring motivation, planning, and an ability to analyze and apply the instructional content being taught. When instruction is delivered online, additional challenges result because students are often separated from others sharing their backgrounds and interests, have few if any opportunities to interact with teachers outside of class, and must rely on technical linkages to bridge the gap separating class participants EODE (2007).

Recommendation for Administration, Faculty, Support Services

Administrators are working closely with technical and support service personnel, ensuring that technological resources are effectively deployed to further the institution's academic mission. Moreover, they need to ensure that the instructional needs of online students are met. Online learners should be provided with information about the online class, including additional information before the class begins, a list of additional courses available, how to access services available to them from main campus, and what will be expected of them in the online learning environment. Students could be at a disadvantage if they begin their course without this information. There should also be self-assessment tools available to determine student compatibility with online education.

Faculty: Good instructional goals should form the basis for instruction, regardless of the medium used. The professor needs to develop an understanding of the characteristics and needs of the students in his or her class, which includes analyzing the general ability of the class and the potential for learner interactivity. As such, pedagogical choices should drive the technology

decision. Selecting a variety of techniques is important to create an interesting instructional environment. Strategies are required to engage learners in active rather than passive learning experiences. Combining technologies and techniques is useful because the more actively engaged the students, the more likely learning will occur in the online learning environment. The evaluation of the effectiveness of online education should be based on what it is targeted to accomplish, and not be compared to the traditional classroom. For student-athletes, online education would provide more flexibility for learners, help to save time, and assist with a heavy travel schedule.

Students need opportunities for interaction since online education tends to give individuals the feeling of isolation. Group experiences, such as synchronous chats, might not necessarily be the best form for student-athletes who want more flexibility and are willing to trade-off group participation. The instructor needs to actively involve students, provide online offices hours, and have a clear structure which is understood by the learners upfront.

Support Services: Etzel and colleagues (1996) believed that student-athletes comprise one of the most diverse groups of people on college campuses today, particularly with regard to factors such as personal history, academic preparedness, life goals and expectations, physical and psychological skills, and developmental readiness. With the Student-Athlete Academic Support Service (SAASS), comprehensive services to this special population are already in place. Yet, these special services will need to be extended to meet the student-athlete's changing needs. The changes of academic rules by the NCAA and the increase in online course offerings make it essential to effectively reach out to them as a group. Factors related to their heterogeneity should never be underestimated. Mandatory study hall should be supervised so that student-athletes

work more efficiently during the time allotted. There are also support services available on campus. Online support resources should be provided 24 hours, seven days a week so that students can get help when needed.

Research Limitations

Several limitations affected this research study. The most restrictive limitation related to the difficulty of obtaining participants for the study. Other limitations included conflicts with sporting events and factors affecting focus group dynamics.

Obtaining participants: The most challenging experience with this project was obtaining participants. Student-athletes are a very hard population to initially gain approval and participation. In order to gain participation, it was necessary to include the respective academic advisor who was well-known and respected by the athletes. Many of the participants had time conflicts whether because of practice, class, or study hall. However, once the participants were obtained, the sessions were conducted smoothly. The recruiting process took three weeks and resulted in the strategy of over-recruiting revenue athletes after the weak turnout of the first revenue focus group discussion. Those football players who participated in the discussion may have skewed the data. The researcher assumes that these athletes cared about their academics, which is why they were willing to participate.

Sports event taking place: During the weeks of data collection, several varsity sports event took place, which made it hard to recruit specific sports at certain times. This also had an impact on the delayed progression of the research. The request for participants started mid-January, which was a very busy month for all athletes starting spring semester, preparing for

athletic events, or competing. The first two focus group discussions took place in the last week of January.

Factors affecting focus group dynamics: The focus group discussions were conducted within a two-week period. Each group was homogeneous in terms of sports: revenue athletes versus non-revenue athletes. Two focus group discussions were scheduled for each week with non-revenue meetings and revenue meetings alternating. Group meetings were scheduled at the student-athletes' convenience. Most participants in the revenue groups knew each other whereas the participants in the non-revenue groups were a combination of several teams. This might have influenced some athletes' desire to speak at times. Most participants were glad to use the afternoon hours which did not interfere with class time and was either before or after their team practices. The familiarity of the location, the Student-Athlete Academic Support Service floor, and the familiarity of other student-athletes created a comfortable environment. While group size did not seem to inhibit anyone's willingness to participate, time constraints for some student-athletes made it difficult to receive all group members on time. However, everybody partook in the discussions and contributed to the research topic.

One factor that was problematic was student-athletes dropping out at the last moment. The first revenue focus group comprised a total of four student-athletes participating with one athlete arriving late. This may have affected the dynamics in this particular group and reduced the variety of potential responses. These small numbers might have limited the themes that emerged from the discussion, yet the quality of the responses of the athletes who participated was high. Another factor that affected group dynamics was the requirement that student-athletes must have taken at least one online class and had to be non-freshmen. The requirements were set

because of the novel experience affecting first-year students. Only student-athletes who fit these requirements were allowed to participate so that the answers would not interfere with the genuine responses of the participants.

Key Informant People (Selection of Participants): Five Key Informant Interviews were conducted with staff members of Virginia Tech's Student-Athlete Academic Support Service (SAASS). These participants work with student-athletes on a daily basis. Participants included one learning specialist, three academic advisors (each assigned to one particular sport - revenue, non-revenue, or a mixture of both), and one systems administrator responsible for technological support.

Order of Interviews/Focus Group Discussions: Key Informant Interviews took place over a two-week period and were completed before the first focus group discussion took place. Each interview took place at the participant's convenience for time and location. All focus group discussions were held in Lane Stadium at their time preferences. All participants freely shared their concerns and perceptions pertaining to the topic. The first focus group discussion included non-revenue athletes, participants who have shown interest in the study, but had many time restrictions. They seemed to be glad to participate despite having to come right after their workouts. The second group was held the day after with revenue athletes. The recruiter for this group had a difficult time finding participants. These athletes appeared to be a difficult to invite for a discussion meeting. This group included last-minute call-offs of two athletes, which limited the number to four. Nevertheless, the participants contributed to a good discussion. Non-revenue athletes comprised the third group, and had the highest attendance of all four groups. This was likely due to the fact that a Student-Athlete Advisory Committee (SAAC) meeting took place the

night before the interview, during which an announcement was made to invite student-athletes to participate in the study. Information gathered in this group was rich. The fourth and last focus group consisted of revenue athletes in the early afternoon. The time was chosen in order to recruit the hard-to reach revenue athletes right before practice time. The group had a good turnout and the discussion went smoothly.

Recommendations for Future Research

Though few problems were encountered during this research effort, there are several factors to consider for improving future efforts. Recommendation for future research includes having larger sample sizes and different demographics within the student-athlete population, varying the interview timing, including faculty or other personnel dealing with athletes, and examining different universities and different countries.

Because the sample was small, including five interviewees and 26 focus group participants, the information can only be generalized to selected student-athletes within a university similar to Virginia Tech. The study only involved non-freshman student-athletes with athletic eligibility in 2007-2008, and who have completed at least one online class. It would be interesting to assess these athletes over a period of time to identify patterns and trends.

It is recommended that further research be conducted using a larger sample size. Due to the subject matter of this exploratory research study, more research within this population would enable a larger pool of information which could allow conclusions to be generalized to the greater student-athlete population. Further research is recommended to investigate the perceptions of diverse groups, such as African-Americans, international students, different

genders, student-athletes with learning disabilities, and so forth. Also, interviews and focus group discussions could be expanded to include faculty, head coaches, staff, and other people dealing with student-athletes. It would be interesting to observe the perceptions about online education as an alternative avenue for student-athletes among these groups. This would generate more information that could potentially improve the academic wellbeing of student-athletes. In order to improve the outcome of focus group discussions, it is important to consider several factors during recruitment including a team's travel and practice schedule, in-or out-of-season, exam periods, timing during the day, timing during the semester, and room reservations. For some sports, it is recommend to over-recruit participants.

The best time to conduct similar research would probably be during the summer months when there are relatively few athletic events that could cause time conflicts. Finding a less stressful term would possibly decrease student-athlete reluctance to spend time for a discussion meeting after a long day of practice and school, and therefore promote more participants. This study was able to determine the perceptions, practices, and concerns of online education among student-athletes at Virginia Tech. Further research is needed to include other universities. This could include university and college settings at other Division I schools, universities with digital campuses, or similar research universities.

The subject matter of this research is fertile ground. The recent online cheating scandal involving student-athletes as Florida State University might have started a small controversy that could affect the growing online course offerings nationwide. Another recommendation for future research is to conduct studies with athletes from different countries. It would be interesting to see whether or not student-athletes in the United States have the same concerns as athletes in Europe.

To what extent do the different national athletic systems have similar or different concerns? Unlike North America's uniquely organized and structured combination of athletics and higher education (*student and athlete*), many countries struggle to provide efficient opportunities for their prospects. The split between academic pursuits and athletic commitment has been a global challenge. In recent years, there has been a trend toward more distance education universities emerging throughout the world. It might be interesting to learn from other countries how they provide more flexibility for the student-athletes' unique demands and how they may provide efficient opportunities. These questions demand further research.

With the Olympic Games taking place this year, how many of these competitive elite athletes will also be competitive students in the classroom at the same time? The Olympic motto, made up of three Latin words citius – altius – fortius (Latin meaning for faster – higher – stronger), seems not only to pertain to the athletic arena, but also to the digital arena. The beginning of the 21st Century is undergoing a rapid rate of technological and social change, which affects higher education as well. This is expressed by increasingly technological advancements allowing *fast* communications and information processing, *high* connectivity in that communities are no longer defined only based on geographical proximity, and *stronger* as well as newer technologies developing according to interest, work patterns, and opportunity. Researchers agree that stimulating the creation of a balance between academics and athletics has to be encouraged (Gaston-Gayles, 2005; Lorenzen & Lucas, 2002). The Greek philosophy promotes an adequate development of both body and mind, promoting athletic health and academic health. Online education is one strong medium by which the two could grow symbiotically.

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Appendix A

INTERCOLLEGIATE ATHLETIC ONLINE LEARNING PECEPTION SURVEY AT VIRGINIA TECH

Interview Guide (Focus Group Discussion)		
Opening / Introduction Question: Tell us your name, your major, your sport, and how long you have been at Virginia Tech. How many online courses have you taken?		
RQ1:	**What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?**	
	FGQ1:	What are your concerns related to maintaining your athletic role?
	FGQ2:	What are your concerns related to your academic role?
	FGQ3:	What may prevent you from excelling fully in the classroom?
RQ2:	**What are student-athletes' perceptions of the benefits and barriers of online education?** Think about the experiences you have had when you took your first online course or/and that you have with the online courses you are currently taking.	
	FGQ4:	What do you think has worked well for you in an online course?
	FGQ5:	What do you perceive as barriers to online courses?
	FGQ6:	How do you perceive the need of online courses in addressing the barriers and problems as discussed earlier (RQ1)?
	FGQ7:	How do you perceive the need to have the online courses to make being away from campus easier?
RQ3:	**What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?**	
	FGQ9:	What are you looking for in an online course that would help you balance/accommodate your current situation?

Ending Question:
Is there anything else that we missed? Is there anything else you wish to say?

Appendix B

INTERCOLLEGIATE ATHLETIC ONLINE LEARNING PECEPTION SURVEY AT VIRGINIA TECH

Interview Guide (Key Informant Interview)		
RQ1:	**What are the primary concerns facing student-athletes related to their dual career as both a student and an athlete?**	
	KIQ1:	What do you think are the major issues/concerns of student-athletes in having two careers? ▪ What might be some barriers that you feel student-athletes experience that may hinder fully performing in the classroom?
RQ2:	**What are student-athletes' perceptions of the benefits and barriers of online education?**	
	KIQ2:	What are the experiences that you have had with student-athletes taking online courses? ▪ What do you think may be the benefits of online courses for SA? ▪ What do you think may be barriers to online courses for SA? ▪ To what extent are SA ready/ willing to take an online course? Probes: how frequent do SA take online courses/which courses, do they succeed/drop out (why?), computer literacy, mand. study hall
	KIQ3:	Imagine you have to advise a student-athlete in taking a course which is offered both online and in a traditional setting. What would you recommend and why?
RQ3:	**What type of online environment could increase learning satisfaction and learning outcomes for student-athletes?**	
	KIQ4:	If you had the chance to design an ideal learning environment for a student-athlete, what would it look like? ▪ What role would online courses play in it and why? ▪ What characteristics of a course design do you think would work well for student-athletes? (Probes: synchronous / asynchronous) ▪ To what extent are you familiar with the technology, services, and courses offered by the Institute for Distance and Distributed Learning (IDDL) at Virginia Tech? (Probes: future use / trend)
RQ4:	**Do revenue athletes perceive online learning differently than non-revenue athletes?**	
	KIQ5:	How, if at all, do you think revenue athletes perceive online learning differently than non-revenue athletes? (Note: revenue sports are defined as team sports that can generate revenue; i.e. football, men's

		and female's basketball)
RQ5:	**Does spending a significant amount of time away from campus make online education a better method of learning?**	
	KIQ6:	How, if at all, do you think a large amount of time spent away from campus affects online courses?

Ending Question:
Is there anything else that we missed? Is there anything else you wish to say?

Appendix C

QUESTIONNAIRE STUDENT-ATHLETES

Demographics

- What's your gender: □ Male □ Female
- What's your major (field of study): _____
- What's your class standing: □ Sophomore □ Junior □ Senior □ Grad
- What's your ethnicity: □ Caucasian □ African-American □ Native □ Hispanic □ Asian □ Other:_____
- What's your age: □ <20 □ 20-21 □ 22-23 □ 24-25 □ > 25
- What's your sport? _____
- What's your time commitment?

(a) on academics per week	(b) on athletics per week	(c) days away during in-season semester
□ None	□ None	□ None
□ 1-4 hours	□ 1-4 hours	□ 1-4
□ 5-9 hours	□ 5-9 hours	□ 5-9
□ 10-14 hours	□ 10-14 hours	□ 10-14
□ 15-19 hours	□ 15-19 hours	□ 15-19
□ 20-24 hours	□ 20-24 hours	□ 20-24
□ 25-29 hours	□ 25-29 hours	□ 25-29
□ 30 or more hours	□ 30 or more hours	□ 30 or more days

Online Learning Experience

Tell me about your online learning experience that you have had and/or currently have at Virginia Tech. Please describe:

- Number of online classes already taken
- What kind of classes have you been taken? (core/ elective/ optional)
- Which specific online course(s) have you taken?
- What was a positive and/or negative experience with online courses?
- Did you finish all online courses taken? (If you dropped out of an online courses, why and was it at the beginning/midst/ending of the semester?)
- Will you continue taking online courses? Why?
- If you had the choice to decide whether to take an online class or the same class offered in a traditional classroom, what would you pick and why?
- How many online courses are you taking at the moment?
- What deliver system(s) have worked very well for you?

Is there anything else you would like to share or comment that has not been covered in the discussion?

Appendix D

CONSENT FORM FOCUS GROUP PARTICIPANTS

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Informed Consent for Participants in

Research Projects Involving Human Subjects

Title of Research Project: Gaining Gold Medals and Gowns: Equilibrating the Dual Career of Student-Athletes with Online Education

Investigator(s): Dr. Kerry Redican, Principle Investigator; Sigrid Kreb, Co-Investigator; Department of Learning Sciences and Technologies, Virginia Polytechnic Institute and State University

I. Purpose of this Research/Project

The purpose of this study is to assess student-athletes' perception toward online education. I will be asked to share my experiences on this topic during a focus group discussion. There will be six to eight student-athletes in a focus group who have athletic eligibility in 2007/2008 and have had at least one online course while being at Virginia Tech.

II. Procedures

I am willing to take part in the above-mentioned discussion. I am aware that my participation in this interview will involve sharing with the moderator my experiences of being a student-athlete and my perceptions, practices, and concerns about online education. We have asked that the athletic academic director helps us locate potential participants for this study. You were sent a letter inviting you to participate. The focus group discussion will be tape-recorded and will last approximately two hours. Audio tapes will be transcribed after recording, and data will be studied for patterns.

III. Risks

I have been informed that the risks associated with participating in this study are minimal.

IV. Benefits

I understand that no promise or guarantee of benefits has been made to encourage me to participate. Information gathered will be used to learn more about the factors that are related to student-athletes' increase of academic motivation and performance.

V. Extent of Anonymity and Confidentiality

The discussion from the focus groups will be audio-taped, and the assistant will take notes during the questioning. Confidentiality regarding answers will be protected by removing identifying names from the transcripts of the tape-recorded answers. The key to the code of participants, the tapes, the computer disks, and the hard copy of the focus group answers will be kept securely. Information from the recorded focus groups will be destroyed three years upon completion of

research. At no time will the researcher release the results of the study to anyone other than individuals working on the project without your written consent.

VI. Compensation
I am aware that I will not receive any form of compensation for participating in this study.

VII. Freedom to Withdraw
I understand that my participation in this study is entirely voluntary and that my refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. If I choose to withdraw from the study, any information about me and any data that I have provided will be destroyed.

VIII. Approval of Research
This research has been approved, as required by the Institutional Review Board of Research Involving Human Subjects at Virginia Polytechnic Institute and State University and by the Department of Learning Sciences and Technology.

IX. Participant's Responsibilities
I voluntarily agree to participate in this study. I have the following responsibilities: to participate in focus group discussion of no more than two hours, as described in Section II above. My responsibilities are to answer questions asked during the focus group session.

IX. Participant's Permission
I have read and understand the *Informed Consent* and the conditions of this study. I have had all of my questions answered. I hereby acknowledge the above and give my voluntary consent:

*Signature of Participant:*_____ Date: _____

*Printed Name:*_____

Signature of Investigator: _____ Date: _____

*Printed Name:*_____

Should I have any pertinent questions about this study or its conduct, or participants' rights, I may contact:

Principal Investigator: Dr. Kerry Redican Department of Learning Sciences and Technologies Virginia Tech	(540) 231-5743, kredican@vt.edu
Sigrid Kreb, PhD Student	(540) 232-3185, gkreb@vt.edu
David M. Moore Chair, Virginia Tech Institutional Review Board for the Protection of Human Subjects	(540) 231-4991, moored@vt.edu

Appendix E

INSTITUTIONAL REVIEW BOARD APPROVAL

VirginiaTech

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, Virginia 24061
540/231-4991 Fax 540/231-0959
e-mail moored@vt.edu
www.irb.vt.edu
FWA00000572(expires 1/20/2010)

DATE: December 11, 2007

MEMORANDUM

TO: Kerry J. Redican
Sigrid Kreb

Approval date: 12/10/2007
Continuing Review Due Date:11/25/2008
Expiration Date: 12/9/2008

FROM: David M. Moore

SUBJECT: **IRB Expedited Approval:** "Equilibrating the Dual Career of Student-Athletes with Online Education" , IRB # 07-621

This memo is regarding the above-mentioned protocol. The proposed research is eligible for expedited review according to the specifications authorized by 45 CFR 46.110 and 21 CFR 56.110. As Chair of the Virginia Tech Institutional Review Board, I have granted approval to the study for a period of 12 months, effective December 10, 2007.

As an investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in previously approved human subject research activities to the IRB, including changes to your study forms, procedures and investigators, regardless of how minor. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.
3. Report promptly to the IRB of the study's closing (i.e., data collecting and data analysis complete at Virginia Tech). If the study is to continue past the expiration date (listed above), investigators must submit a request for continuing review prior to the continuing review due date (listed above). It is the researcher's responsibility to obtained re-approval from the IRB before the study's expiration date.
4. If re-approval is not obtained (unless the study has been reported to the IRB as closed) prior to the expiration date, all activities involving human subjects and data analysis must cease immediately, except where necessary to eliminate apparent immediate hazards to the subjects.

Important:
If you are conducting **federally funded non-exempt research**, this approval letter must state that the IRB has compared the OSP grant application and IRB application and found the documents to be consistent. Otherwise, this approval letter is invalid for OSP to release funds. Visit our website at http://www.irb.vt.edu/pages/newstudy.htm#OSP for further information.

cc: File