

AN EXAMINATION OF COLLEGE STUDENT ATHLETES'
ACADEMIC ACHIEVEMENT

by

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B.A., Whitworth College, 1998
M.S., Kansas State University, 2001

AN ABSTRACT OF A DISSERTATION

Submitted in partial fulfillment of the

Requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Counseling and Educational Psychology
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2005

Abstract

There is growing concern over the academic performance of student athletes in today's institutions of higher education. Across all media, the public is constantly reminded that the success rate of student athletes is not what it should be. One hypothesis for this poor performance is that athletes are not as well prepared to go to college as their non-athletic counterparts. This could be attributed to low high school academic standards, or high school teachers allowing athletes to underperform due to their status as an athlete, or a lack of time for studying due to sport participation. The NCAA mandates certain academic standards for entrance into college, yet athletes still struggle to maintain passing grades, with some failing to graduate. Most college students are admitted to college based on their potential to benefit from an institution's programs and educational opportunities. In many institutions, especially at the Division I level, student athletes are admitted for their potential to provide benefits for the institutions. This study compared the college graduating GPA of athletes and nonathletes relative to ACT score to determine if athletes were underperforming in college. Additionally the effect of gender, ethnicity and type of sport was examined. This study used hierarchical regression equations to examine these effects. When looking at athletes only, type of sport, gender, and ethnicity had very little influence on graduating GPA. When examining all students, ACT test scores were significantly related to college graduating GPA.

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Chapter One

Introduction

There has been growing concern over the academic performance of student athletes in today's institutions of higher education. The media constantly reminds the public that the academic success rate of student athletes is not what it should be. Student athletes have a host of academic support services at most Division I schools, but many are still not performing well in the classroom. There are several hypotheses for this poor performance. Some authors argue that athletes are not as well prepared academically as their non-athletic counterparts, perhaps due to low high school academic standards, high school teachers allowing them to underperform due to their status as an athlete, or a lack of time for studying due to sport (Covington, 1992; Hollis, 1998; King, 1998; Lambertson, 1998; Lewis, 1997; Mixon, 1995; Pascarella, 1991; Richards, 1999; Ryan, 1989; Shulman, 2001; Stuart, 1985; & Unruh, 2001).

Most college students are admitted to college based on their potential to benefit from an institution's programs and educational opportunities. In many institutions, especially at the Division I level, student athletes are admitted for their potential to provide benefits for the institutions. This conflict of interest has been in higher education since athletics first became a fixture among colleges and universities in America. Student athletes in the revenue-generating sports at some of the most successful universities are rarely expected to be stellar in the classroom, as long as they display their skills on the playing field. Athletes are chronically underprepared when they enter college, where the problems become exacerbated by the time demand of athletics and the culturally approved stereotype of the 'dumb jock' (Covington, 1992; Hollis, 1998; King, 1998;

Lambertson, 1998; Lewis, 1997; Mixon, 1995; Pascarella, 1991; Richards, 1999; Ryan, 1989; Shulman, 2001; Stuart, 1985; & Unruh, 2001). Thus, the underprepared athletes attend college classes filled with adequately prepared nonathletic peers and find themselves in a contest that no amount of athletic talent can influence. They face a diminished chance of experiencing success and victory, but instead have a heightened chance of facing defeat (Kramer, 1996).

The research on the academic implication of participating in intercollegiate athletics is mixed at best. One reason for this is the difficulty in controlling all the possible confounding variables involved in an investigation of student athletes and the effects of their athletic participation on academics. Another reason is the differing levels of athletic participation. NAIA schools, Division I, II and III institutions all differ in their selectivity of students for admission. Much of the current research focuses on Division I institutions that are highly selective in their admission criteria, making statistical comparisons between the highly capable general student body and the less prepared student athlete difficult.

Shulman and Bowen (2001) in the book *The Game of Life*, examined many of the factors surrounding collegiate sport. One chapter in particular focused on the academic performance of student athletes. The authors examined several different cohorts from three separate decades in the years 1951, 1976 and 1989. They found that student athletes were not only performing poorly in their academics, but they were actually ‘under performing’ compared to their non-athletic counterparts. That is, a student athlete with the same high school GPA and standardized test score would, on average, perform worse than a non-athlete with the same entering criteria. The authors of this text used

highly selective institutions for their study. They examined four Division I public institutions: North Carolina- Chapel Hill, University of Michigan- Ann Arbor, Pennsylvania State University, and Miami University- Ohio. They also examined several Ivy League, Division III, and private institutions. Results showed that student athletes were significantly underprepared compared to nonathletes at all institutions except the Division I public universities. The authors hypothesized that this was because the athletes at Division I institutions were admitted with much lower GPA's and test scores than the non-athletic population, so there were insufficient comparable students to reach statistical significance. To date, Shulman and Bowen (2001) are the only researchers to have conducted a study examining the effects of incoming GPA and ACT score on college graduating GPA. However, what is needed is a study of institutions that have lower minimum entrance standards. Research is needed at institutions that have enough comparable nonathletes, to examine the effects of students' participation in intercollegiate athletics. Only after this research has been conducted can we hope to begin to examine the critical issue of why student athletes struggle academically. At Kansas State University, a sufficient number of athletes and nonathletes should be available to achieve statistical significance.

Statement of the Problem

This study compared the college graduating GPA of athletes and nonathletes relative to high school GPA and ACT score to determine if athletes were underperforming in college. Additionally the effect of gender, ethnicity and type of sport was examined.

Significance of the Study

This research will help to fill the void of current research on student athletes' academics when compared to nonathletes with similar high school GPA and ACT test score. This study did not rely on self-reported data by the athletes, but analyzed archival data from the university's Registrar database and allowed for a longitudinal look at student athletes from 1993-1997.

Hypothesis/Questions

1. Within each year, do graduation GPA's differ between student athletes and nonathletes?
2. Are there gender differences in graduating GPA's between student athletes and nonathletes?
3. Is there a sport difference in graduating GPA's between student athletes?
4. Is ethnicity correlated with athlete graduating GPA?

Participant Variables

All variables were retrieved from the Student Information System (SIS) database which is Kansas State University's live database maintained for student records. The database contains various information on students including, contact information, admission test scores, credit hours earned and so forth. The variables relevant for this study are as follows:

- Sport (classified into high profile (football/men's basketball) and low profile (the rest of the sports))
- Gender (male and female)
- high school GPA (estimated from ACT, and self-reported from ACT)
- test score (ACT)
- ethnicity/race (broken into two groups, Caucasian and non Caucasian)

- college graduating GPA (both athletes and nonathletes had six years from the data of entry to graduate)
- athlete/non-athlete status (the students are flagged in the SIS database and given a number that corresponds with their sport)

Chapter Two

Literature Review

Introduction

From the early 19th century to the late 20th century the number of institutions of higher education exploded across the US. In colonial America there were nine institutions of higher education, at the end of the civil war over 700 colleges and universities had been established across the country (Rudolph, 1990). By the end of the 1800's athletics would play some role on most campuses. Athletics began as an extracurricular activity started by students looking to get away from the intellectual and moral grind of academics. As athletics grew on college and university campuses across the US, control was wrested away from students and became a major dilemma for faculty, administrators, and alumni. For nearly half a century, control of intercollegiate athletics and the importance placed upon them would cause an entire nation to examine the ideologies it was founded upon. The nation also had to examine the role athletics would play in the future of higher education.

In order to understand the development of athletics within higher education, it is important to understand how colleges and universities began in America. Alumni from Oxford and Cambridge founded Harvard, the first institution of higher education in America. Approximately 133 men immigrated to America from Cambridge and Oxford respectively and a founder stated "one thing we longed for and looked after was to advance *learning* and perpetuate it to Posterity.... (Rudolph, 1990)." The founders had complex reasons for establishing Harvard, but among them was the intention to re-create a bit of old England in America. By the time of the American Revolution, England's

colonies in America were supporting nine colleges in one fashion or another. Each of the nine was a variation on a theme from Oxford and Cambridge in the mother country of England.

There was no indication in colonial America that higher education was to become popular. In America, characteristics were beginning to take shape that encouraged individual effort. Those who held this ideal were jealous and hostile toward privilege, and did not believe in an environment that would hold citizens down. Hard work and tenacity were bringing rewards like nowhere else in the world, and the idea of the self-made individual in both social and economics was the key. Administrators and faculty did everything possible to keep people away, and most people saw it as an extension of the English universities that only the upper class society attended. The curriculum did not appeal to most people, and cost was a major factor.

The early American universities and their curriculum focused mainly on medieval arts and sciences and had a Renaissance flair in literature. Latin was the language of the law, church, and medicine; which furthered the impression that American colleges and universities were only for the elite members of society. In addition to the English influence on the curriculum, the idea of religious and faculty control was carried over. Early colleges were essentially aristocratic in clientele. The American Revolution was soon to change the way college faculty interacted within the newly formed United States.

The Revolution damaged buildings, decreased enrollments, and lowered endowments, but the revolution did far more fundamental damage to the purpose of the universities and colleges. The revolution may have begun as a movement for independence, but it became a movement for democracy. It was a statement to the fact

that in America individuals counted for more, took less account of their superiors, and achieved whatever their own distinction and ability allowed them. This rising spirit of democracy overtook American universities as well, much to the dismay of the many whose old ways agreed with the original English curriculum.

Sensing the new importance of higher education, state legislators began to establish new relationships with existing institutions and others that would blossom in the immediate postwar years. Between 1782 and 1802 nineteen colleges in existence today were chartered. This is more than twice as many colleges than had been founded during the previous 150 years (Rudolph, 1990). Religious rivalry, state loyalty, increasing wealth, and a growing population all helped to stimulate the growth of colleges. The American college was beginning to have appeal to families of the middle class because it was recognized as a means of getting ahead. During the same time, America was attracting people from throughout Europe, creating a diverse society. College helped to develop a sense of unity and an advancement of learning, combating ignorance and a barbaric society. The legacy of the American Revolution to the American college was to create the belief that the colleges were serving a new responsibility to a new nation: “the preparation of young men for responsible citizenship in a republic that must prove itself and the preparation for lives of usefulness of young men who also intended to prove themselves (Rudolph, 1990).”

In the beginning colleges and universities had a slow start, but soon they began to have exponential growth. Colleges were cropping up everywhere, but often if there were students, there was no building, a building but no professors, or professors but no administration. People attempted to start as many as 700 colleges before the Civil War

ended, resulting in America being known as the “land of colleges.” America went into the Civil War with 250 colleges, of which 182 still survive (Rudolph, 1990).

As colleges were trying to find themselves, they were having trouble melding English aristocratic heritage with the new American democracy. Because democratic growth in the United States was contemporaneous with the growth of higher education, colleges were having difficulty establishing learning as one of their fundamental interests. Americans were impressed with the self-taught, self-made man, whose elevation in society and wealth were accomplished without the benefit of higher learning. In effect, colleges had to portray an almost anti-intellectual attitude to agree with America’s perception of democracy. In the end, faculty and administrators provided a new rationale for attending college: to prepare one to make more money after attending college. Once this rationale was adopted, American colleges would no longer be linked to the colleges of England where learning for learning’s sake was the purpose. Colleges in America stood for opportunity, independence, and democracy.

As faculty and administrators wrestled with the ideals they would stand for, the students began to develop their own purposes for attending. The development of the extracurricular happened quickly and soon overtook the college environment. Before long, the students’ extracurricular activities would dominate college life and would inadvertently help the college to develop its purpose and place in the United States. By the 1870’s most colleges and universities had vital extracurricular segments throughout their campuses.

The first extracurricular activity to make itself felt on the college campus was the debating club better known as the literary societies. The literary societies impacted

college life in several ways. Debate gave a sense of community and purpose and provided an expression of acquired knowledge. Literary societies also were responsible for founding the literary magazines on campus. Intercollegiate rivalry developed from the very beginning due to these publications. Literary societies would send publications to prominent members in American society and compete with other colleges and universities for endorsement and praise.

The next movement in the development of the extracurricular was the Greek-letter fraternity system. The fraternity system began in the early 1800's and was a major part of every college campus by the mid 1800's. Fraternities originated in the rural colleges and universities, but quickly expanded into urban institutions. They were created to fill the emotional and social void present on most college campuses. They encouraged loyalty and community unlike any other extracurricular activity at the time. The fraternal life offered an escape from the monotony of everyday intellectual activities. Fraternities institutionalized many of the vices of young men attending college: smoking, card playing, drinking, and the social companionship of women. By the mid 1800's, the idea of the extracurricular had taken hold on most college campuses. Students became aware of the potential social ramifications of extracurricular activities, once they had a social outlet, and they were not about to turn back, much to the dismay of faculty and administration.

Another extracurricular activity to emerge was athletics. There was nothing sudden about the development of athletics on the college campus. At first, strenuous physical activity was considered "ungentlemanly, and unbecoming of a scholar" (Rudolph, 1990). Until the early 1800's organized physical activity was nonexistent. It

wasn't until the 1820's that German refugees introduced gymnastics to Harvard students. The students were so taken with the sport, a gymnasium to house their physical outlet was built. Soon colleges across the country were building gymnasiums to house the newest form of extracurricular activity that arrived on campus. These buildings soon fell into disrepair, because the physical movement collided with Puritan beliefs and the faculty and administration of early colleges. It wasn't until another wave of German gymnastics flooded the college scene in the late 1840's that the gymnasium movement was reawakened.

By the late 1860's, administrators had given up trying to quash the extracurricular and instead began to assume responsibility for it. Colleges began to form departments of Physical Education and Hygiene, charged with the responsibility of undergraduate health. College administrators were hoping the enthusiasm for physical activity could be channeled to a good purpose, so they began to regulate it in business-like fashion. Students rebelled against this control, stating "that exercise ceases to become a pleasure and becomes labor, where are the sports that become a great university?" (Rudolph, 1990)

College officials had done little to reform college life, so students were forced to shape their own environment. College life became more of a social atmosphere, and the extracurricular kept expanding. Administrators did not understand that, for the American college student, the gymnasium, boat club, and baseball team were necessary to enjoy life to the fullest. These were the activities in which the student embedded his values. The extracurriculum allowed the student to state the case for the human mind *and* human body. Students enjoyed challenging their body as much as their mind, and once the

movement of extracurricular athletics was born faculty and administrators would have trouble taming the monster it was to become.

The battles fought on the playing field satisfied a need for community – not just separate class unity – by providing the occasion for the entire student body to take part in an intense experience (Smith, 1988). Faculty could see early on that it was less harmful and possibly even beneficial to allow a certain degree of physical mayhem on campus. Another factor affecting athletic competition was the growing enrollment on college campuses. As more students began to attend college, the need for community became even more important. Athletics were vital for creating this environment. The extracurricular, which began with literary societies and the freeing of the intellect, transformed the life-blood of the student's social and physical life throughout the colleges in America. Athletics were soon to bring students of various colleges together in displays of excellence and competition the faculty rarely saw in the classroom.

Rooting for the home team provided a focus for school spirit at a time when the campus had been fragmented by the changes in curriculum. At first students had a standard curriculum, but they now had a choice in their courses (Shulman & Bowen, 2001). The students began to realize their ability to force change. Once students got a taste of the control they possessed, it would be difficult for faculty and administrators to continue to impose the rules and regulations as they had before. Students also became acutely aware of the community spirit felt on college campuses as the results of their collective force took effect.

In the college climate of the late 1800's, it is not surprising that team, rather than individual sports met the need for community. The value of team sports in the pre-

intercollegiate era was the tendency to draw the student body together in dynamic yet symbolic activities. Team sports also linked college campuses to the outside community by the strength of their visual imagery. Sporting contests were easily translated into photographs, newspaper articles, marketing brochures and in later years, television.

One of the first team sports to challenge another college to a meet was the crew teams of Harvard and Yale. In 1852, Yale met Harvard in the first intercollegiate contest, a boat race in New Hampshire. A New York newspaper predicted intercollegiate sport “would make a little stir in a busy world (Smith, 1988).” The offer by a railroad superintendent to pay for the trip for each team member was the beginning of the commercialization of sport in colleges and universities. The superintendent believed there was enough interest in college athletics that he would make his money back from the spectators attending the contest. The team members from Yale and Harvard took the meet far less seriously than teams would in the coming decade. What was missing from the first intercollegiate meet was the careful preparation and prolonged training that would one day dominate athletics. There was no professional coach, or prolonged training regimen because they thought of the contest as a “jolly lark” (Smith, 1988).

Though commercialization predated professionalism in college athletics, both elements were present early on. The spirit of winning quickly replaced any thought that participation in friendly competition was the principle end of college athletics. Within less than a decade of the first intercollegiate crew meet, several factors not associated with early athletics had crept into physical contests. The prestige from winning, the honor brought to the college, and the interests of the public in the physical prowess of the educational elites were all in existence. In addition to this, the value of sponsoring

athletic contests for commercial gain and the concern for the outcome by bettors became factors (Smith, 1988). Businesses would be responsible for commercializing sporting events, and colleges would be responsible for both professionalism and for rationalizing commercialism to the public.

Baseball teams were one of the next collegiate sports to compete at the intercollegiate level. Mark Twain was quoted as saying baseball in America was the “very symbol, the outward and visible expression of the drive and push, rush and struggle of the raging, tearing and booming nineteenth century (Smith, 1988).” Baseball soon overtook crew to become a main source of intercollegiate pride. Baseball, more than any sport before it, showed the freedom of students to pursue intercollegiate athletics, likely leading to commercialization and professionalism. This process would challenge the very concept of amateurism that Americans had adopted from the British. College baseball would soon give way to football, but it was still a major sport throughout colleges, and would later become a professional powerhouse.

The Development of Intercollegiate Football Teams

In the early 1800’s, Americans played a game they called football. It resembled the kicking style of rugby brought over from England, although Americans began to modify the game. By the late 1800’s, the game was radically different and was called American football. The first intercollegiate game of football was in 1869 between Princeton and Rutgers. During the next decade the shift from a kicking game to a throwing game was complete. The growth of football in the late 1800’s was enormous, and little could be done to slow it down. American football, with its violent element, fit well into American’s mentality, who demanded manliness and the virile features of

society (Smith, 1988). Football glorified the individual; it put on display not the wonders of machines but the robustness, ingenuity, and imagination of man (Rudolph, 1990). The perceived function of football as a facilitator of American qualities and values was a potent force in making the sport a feature on most college campuses. Football was more than just a rough college game; it was a symbol of college and national virility.

Football, considered the manliest of college sports at the close of the 1800's, could provide the proof that colleges as institutions, as well as college men, were virile. Athletic prowess of an athlete on a football field was in marked contrast to the dyspeptic scholar of an earlier time (Smith, 1988). It also allowed a unity between colleges that had never existed before. Institutions who had never found it advisable to consult on matters of curriculum now sought a means for regulating their athletic relations. The rise of football also provided a democratic solution to the increasing number of rich men's sons on the American campus. President Aurthur Twining Hadley of Yale in 1906 reported that football had taken "hold of the emotions of the student body in such a way as to make class distinctions relatively unimportant and had made the students get together in the old-fashioned democratic way (Rudolph, 1990)." It also would enable an entire generation of young men from the coalfields of Pennsylvania to turn their back on the mines that had employed their fathers. Football's brutality and the appearance of manliness was to become an important measure of American higher education and the opportunities afforded to the young men who came to play. Football would eventually open up college to every man.

Embedded in an aggressive sport in which the individual and the team fought against a common foe, was another deep and obvious fact: the sport was fun and an

exciting outlet for the energy and passions of both participants and fans. Football was often given credit for building a sense of community on college campuses, but another often-unwritten justification was the sense of community it provided to the fans. The general public began to identify with the activity of the local college and university, attending the meets in droves. Football appeared to contrast with the public's long held perception of higher education, which emphasized the "egg head" and esoteric knowledge (Smith, 1988).

In 1901, the 25 colleges and universities that played intercollegiate football had the sports entertainment market to themselves (Shulman & Bowen, 2001). Without the distractions of television, video games and other modern pastimes, the general public was an easy target for the marketing of sporting events. Colleges and universities began to see an untapped resource in the paying spectators at collegiate sporting events. Once the players, students, alumni, and spectators accepted and supported the game of football there was no stopping its growth. Americans lacked the psychology for failure, they had developed a workable ethic for success, so the games had to be won. In football, this ethic was revealed in "the almost invisible line between clever tactics and foul play" and in all those excesses of enthusiasm, recruitment, and training which were aspects of total mobilization for victory (Rudolph, 1988). The invisible line was of course not particular to football. It was paralleled in American life by an equally almost invisible line between the Christian and fine gentleman, between the moral and immoral business man, between what Progressives called a good trust and a bad trust; the almost invisible line between the compulsion to succeed and the injunction to be moral (Rudolph, 1988).

The role of the press in the growth of football's popularity is unquestionably profound. The birth of the sports page brought a whole new level of popularity to higher education institutions. For the first time, the American college was a source of popular news, a fact that significantly increased administrative support and encouragement of football. Athletics began to serve as a proxy public relations campaign for colleges and universities. Land-grant institutions of higher education discovered that athletic victories often were more important than anything else in convincing reluctant legislators to open the public purse. If football served democracy on campus by being an instrument of social elevation, it served off campus democracy by creating an important agency of popular entertainment (Rudolph, 1988).

The press was also a key ingredient to publicizing college and university trademarks. Football brought forth banners, song, posters, mascots, colors, and other manifestations that led to the public identification of great institutions of learning. From identifying an institution with a color to identifying it with a football team was a very short step. Before long many Americans would act as if the purpose of an American college or university was to field a football team. The American public established early on the emotional and financial investment they were willing to make. "Football had become a public possession in a way that the classroom never had (Rudolph, 1988)."

The institutional leaders at Harvard, Princeton, and Yale would determine the direction that football and other college sports would take in the future. Football received more credit than any other sport and took the brunt of the criticism given to college sport, because of its brutal nature and unethical play. Others valued it for its promotion of character, virility, and esprit de corps (Smith, 1988). The vast benefits that were believed

to accrue to colleges from the growth of football were not without cost. The positive values of developing an image of virility in what was often looked upon as effete college education and increasing the visibility of collegiate life had a reverse side. The negative side was the whole question of academic integrity, ethical decisions regarding sport, and the brutal nature of football. In the American game of football, the biggest concern was how to secure a victory.

President Eliot of Harvard, the leading educator in America at the time said “as the game of football grows worse and worse with regards to foul and violent play, and the number and gravity of injuries the players suffer continues to escalate, it has become perfectly clear that the game as now played is unfit for college use (Smith, 1988).” This would begin the great football debate that would capture an entire nation for the next few decades. Some may argue the debate rages on, and has yet to be resolved to a satisfactory conclusion.

The brutality of football is well documented throughout its history. Eighteen Americans would die playing the game of football in 1905; in fact Harvard’s entire season had only two games without concussions (McQuilkin, 1993; Rudolph, 1988). No sport could take the place of football, with its roughness, horrific brutality, and unfair play. It only grew worse with the development and implementation of mass plays which involved all players on one side to concentrate on one opposing player. Mass plays took advantage of Napoleon Bonaparte’s military strategy. Concentration of force, mobility, and a firm resolve to triumph or perish gloriously was made functional for American football. Plays such as the famous flying wedge became commonplace. The flying wedge consisted of ten men running full tilt in a “V” formation from a position some

yards behind the ball, massed upon one opposing player (McQuilkin & Smith, 1993).

“The bleeding from breaking his nose early in the game, being kicked in the chest, and cut in the scalp and face, combined with a bruised shoulder and strained knee ligaments were one Princeton’s player memories from his toughest playing day (Smith, 1988).”

Mass plays were successful because they produced winners. If mass plays could produce the five yards or the eventual touchdown, it was far more important than if the experience of participation in college athletics’ were enjoyable. President Eliot of Harvard was also quoted as saying, “deaths and injuries are not the strongest argument against football. That cheating and brutality are profitable is the main evil (Smith, 1988).”

The game of football encouraged such a will to win that the students’ imagination found its way around the traditional sense of ethics. The spirit of American youth at the time was to get ahead and to win, to attain that goal by fair or foul means regardless of morals and ethics. This lack of moral scruples pervaded much of the business world at the time, with similar temptations on the playing field. Intercollegiate contests in America did not have the tradition of gentlemanly play for recreation and fun, rather they were played emphasizing excellence and winning. Some believed football was the most important social force for good in colleges and universities, but others saw its influence for evil apparent in the forms of unfairness, untruthfulness, and brutality as a threat to the vital interest of a college education.

A college education was supposed to be of the intellectual and moral kind, but it was beginning to stray from its founding mission. Students and professors looked at athletics from totally different standpoints. Students were stubborn in support of their own ideas, whereas faculties were equally stubborn in theirs. The freedom of students to

control much of their athletic destiny was a major feature of early intercollegiate sport. No group would challenge student autonomy more than college faculties. Students had been free to develop their extracurricular activities, with athletics being dominant by the late 19th century. The faculty was the most vigorous of several contending groups however that would jeopardize that freedom. The faculty of educational institutions resisted the encroachment of student athletics upon the academic interests of the school.

From an early period of American intercollegiate contests, there was pressure to admit student athletes with little regard for academic considerations. Recruiting was an issue in the beginning of intercollegiate sport as it is today. As the 20th century progressed, recruiting and keeping athletes scholastically eligible for competition became a full-time job. The freedom for colleges to compete for intercollegiate victories and the prestige gained from them brought with it the freedom of procuring athletes, often without regard to academic standards (Smith, 1988). Faculties began to complain of the number and intensity of athletic contests disturbing the actual mission of the university, which included moral and intellectual development. They complained of ungentlemanly behavior, injuries and brutality, and unhealthy moral influence of big city games. They also complained about the financial inducements to attend college and a waste and extravagance under student management. In the Brown Conference Committee Report, the faculty exclaimed, “we are not engaged in making athletes, we want to prevent college athletics from interfering with the mental and moral training of students (Smith, 1988).” College faculties everywhere had formed athletic committees by the end of the 1800’s in an attempt to prevent football and other sports from encroaching on academic interests. Many faculties claimed it was a disgrace to their university and pleaded with

the administration to have it banned. As boards of trustee's were supportive of intercollegiate athletics, it was natural for presidents to not want to create controversy by implementing drastic actions when football crises occurred. Presidents who did were sometimes called unmanly themselves, a term president's feared.

If control of athletics was taken away from the students, and administrators were afraid to make any radical changes, who was controlling athletics? Sports drew upon people's passions and myths in a way that few things do. By drawing in the public, alumni, fans and government officials, schools set up expectations that would be difficult to satisfy. They encouraged outsiders to take a more active role in policy making than is normally found in other areas of academia. The administrations of higher education tried to assume ownership of the athletic enterprise in the early 20th century. This led to an explicit sanctioning of the goals, values, and norms associated with college sports in a way that allowed the athletic enterprise to have access to the inner chambers where the educational mission of the school is defined and pursued (Shulman & Bowen, 2001). The administration of higher education had to answer to numerous constituencies; alumni and other outside interests affected how the athletic enterprise was managed. Outside interests placed commercial pressure on student sports, which greatly affected the academic integrity of colleges and universities.

In order for colleges and universities to justify the great expenditures in athletics, they simply look at their mission statements. The potential revenue-generating justification for intercollegiate athletics falls under the "making money mission." Schools could be seen as investing in an athletic enterprise whose ticket sales, booster donations, and sneaker endorsements might provide dollars that could be used to cover

the cost of a range of activities including the cost of lower profile sports (Shulman & Bowen, 2001). Using this justification, administrators in favor of athletic enterprises could induce schools to follow the money instead of the more abstract academic goals that are central to the institution's mission. Administrators would be able to provide the public with something that is more fun and more easily digestible than dry academic goals.

There has been no shortage of speeches by proponents of athletics that extol the ways in which athletic competition fosters learning for life, training for leadership, the ability to work in teams, self-control and discipline. Yet faculty continued to complain of the number and intensity of athletic contests disturbing serious academic studies (Smith, 1988). Faculty complained about the ungentlemanly behavior, the brutality and unhealthy moral influence of big city games, and the financial inducements to attend college. Many critics condemned college athletics for the illegal enticements to athletes. The hiring of "ringer" players (those who excelled at their sport, but were not really students) high salaries for summer athletes, cheating in the classroom, squandering of athletic money, diabolic practices of professional coaches, lucrative gate receipts and building of costly stadiums were all serious concerns in the late 1800's. Payment of athletes happened in several ways. One was for athletic associations to pay for the room and board of athletes. Another was to use athletic funds to pay for tutors, because keeping athletes eligible was a problem for colleges then as it is now. Pennsylvania State College was one of the first colleges to legalize the recruitment and payment of athletes, when in 1900 the board of trustees sanctioned athletic scholarships to include room, board, and tuition (Smith, 1988).

As athletes began to receive scholarships or payments for their participation in athletics, professionalism crept into the athletic enterprise of colleges and universities. Characteristics of professionalism according to the 19th century included 1) competition for valuable, noncash prizes; 2) competition for money prizes; 3) competition against professionals; 4) charging money at the gate; 5) costs of a training table not borne by the athlete; 6) payment of athletic tutors by someone other than the athlete; 7) recruitment and payment of athletes, and 8) payment of a professional coach (Smith, 1988). School governing boards were becoming increasingly professional as well. Most board members were drawn from the business elite and asked to set policy in American colleges. Soon they were setting athletic policy as well. Encouraged by the commercial and business aspects of college athletics, governing boards increasingly agreed to hiring professional coaches, recruiting student athletes, and erecting large stadiums.

The professional coaching issue was central to the notion of what individuals believed sport was all about. Amateurism in sport was a 19th century upper-class concept created by the English. It was an elitist attitude contrived to keep the lower classes from mixing with their social superiors on the athletic field (Smith, 1988). It was an undemocratic concept designed to make amateurism appear to be superior to professionalism. Crew initiated the idea of the professional coach, but football professionalized coaching in the early 20th century. The introduction and indoctrination of the professional coach does much to explode the myth that there was ever a time when amateur sport ever existed in college athletics. Intercollegiate athletics, almost from the beginning, had the professional spirit. This was seen in the drive and push for excellence, and the professional coach manifested this drive from the beginning.

The British amateur attitude was carried over to colonial America, but because America lacked social classes, at least to the degree of the British, the amateur attitude would never flourish as in Britain. Amateurism as defined by the British was 1) never competing in an open competition, for public money, gate money, and with a professional and, 2) never teaching or pursuing athletics as a means of livelihood (Smith, 1988). Americans, on principle, rejected the British concept of a fixed-status system based upon birth, wealth, and education. This had telling implication for “amateur” sport in America. Amateur ideals could not easily exist in a society whose freedom of opportunity ideology allowed all to seek excellence through ability and hard work. Achieving status in college and athletics became the American way, rather than the fixed-status system seen in England’s elitist society.

It could be argued that the pervasive ideological belief in freedom of opportunity led to a breakdown of amateurism and to a logical accent on professionalism in American college athletics. With a greater freedom of opportunity in America, the college system developed differently from the system of higher education in England. One of the major differences was how Oxford and Cambridge monopolized on higher education in the 19th century. The two universities dominated the entire period during the development of intercollegiate sport. In America, there were no dominant universities. America had a greater freedom and opportunity to found colleges and universities. There was no upper-class control of higher education, and no upper-class control of athletics (Smith, 1988). Any individual, group, or division of government could found a college, and all were free to raise intercollegiate athletics to a level of excellence. The only things necessary were commitments of time, effort, and financial backing. Freedom of opportunity was a

pervasive element in the development of the American university and intercollegiate athletics.

The amateur-professional dilemma in American colleges and universities required a choice between equally undesirable alternatives. The dilemma could be stated as follows: If a college has a truly amateur sport, it will lose prestige as it loses contests; if a college acknowledges outright professional sport, the college will lose respectability (Smith, 1988). The dilemma resulted from the need to protect college sport from outside criticism by using acceptable amateur language while at the same time desiring the prestige and status which came from highly professionalized models that produced winning and excellence. The unsatisfactory solution to this dilemma has been to claim amateurism to the world, while in fact accepting a professional mode of operation (Smith, 1988). By the early 20th century, there was virtually no college in America that was able to preserve amateurism in intercollegiate sport, as the competition for prestige and excellence dominated sport. Professionalism had invaded college sport and had defeated amateurism, as it was understood in the 19th century.

By the 20th century intercollegiate athletics, had become thoroughly institutionalized within American higher education. Control of the athletic enterprise and the motivations of those who wielded that control changed greatly over the history of intercollegiate sport. One fact was apparent though: The athletic enterprise had become an extension of almost every college and university across the United States, and each athletic program demanded its own place on the college campus. With the extreme growth of intercollegiate athletics, the students eventually lost control over their extracurricular activity.

Student freedom gradually lost out to the power of authority. By the 20th century, students had lost control of the extracurricular to the faculty, had lost the freedom to run individual sports to the coaches, and trainers and had lost the financial gains of athletics to the alumni and college authorities. Students primarily lost control of intercollegiate athletics because they lacked the responsibility to run them without conflicting with academic values. As athletics were assimilated into the administration echelon of the institution, student athletes had fewer rights, less freedom, and a lack of control over their own athletic lives (Smith, 1988).

As students lost the control over athletics, the rest of the nation was debating what should be done with this athletic enterprise. Freedom, a key concern in the history of intercollegiate athletics, was a major part of an important decision. In athletics, as in the political life, an age-old question continued to need an answer: “Is it easier to restrain freedom from becoming license and anarchy or to prevent power from expanding into authority and total control (Smith, 1988)?” The intertwining of the athletic and academic enterprises had left college and university athletic programs highly susceptible to both self-imposed and external regulations. Most colleges and the then president of the United States favored reform. Theodore Roosevelt was intricately involved in the reform movement. Harvard wanted to abolish football, and Roosevelt thought that Harvard would be doing the “baby act” if it were to take the foolish course of abolishing football (Smith, 1988). Roosevelt decided to do what he could to help and reform the game, saving it from possible abolition.

One of the first issues to be resolved in intercollegiate sport, was who would be in control? From early on, all those involved in higher education athletics placed winning

and prestige well above whatever else might have been secondary. University presidents had usually been singled out for having the opportunity to reform and run intercollegiate activities. They were also criticized for failing to do so. University presidents had a great amount of power in controlling the destiny of higher education, but rarely took initiatives in reforming intercollegiate athletics. Individually presidents had never been able to control athletics. There are at least two reasons for this, 1) presidents head individual institutions and control intercollegiate athletics only as it necessitates inter-institutional agreements, and 2) full cooperation in athletic enterprises is not possible among institutions competing for resources and enrollment for their own survival, growth, and prestige (Smith, 1988). Inherently, presidents also have a greater problem in controlling intercollegiate athletics. The president is caught between the demands of faculty on one hand and the demands of the governing boards on the other. The two groups have often differed greatly on the role athletics should play in higher education. Presidents are hired and fired by the board, so it is rare to see a president oppose the board's recommendations.

As the control of intercollegiate athletics during the early 20th century was being debated, the brutality and ethical issues involved in football were also coming to attention. There were such loud cries for abolishing football that even the proponents of football had to take notice. Chancellor MacCracken of New York University in 1905 invited representatives of the eastern colleges to meet and resolve some of these issues. Out of this meeting came the call for a national conference of faculty representatives. It was from this meeting that the future National Collegiate Athletic Association (NCAA) would be formed.

The reform group, with the major universities conspicuously absent, met at the Murray Hill Hotel and formed a permanent organization, which would eventually become the NCAA. Palmer Pierce of West Point served as the first president. After the formalities of the meeting were done, the attendees began a lengthy debate over the future of football. Initially the NCAA was weak. This stemmed from two basic facts. First, the prestigious colleges did not readily desire to see another group usurp their power, which they had traditionally held. The “Big Three” of Harvard, Yale, and Princeton were reluctant to have the NCAA create its own football rules committee and eliminate the power that the dominating colleges had held for generations. The second reason came from the laissez faire attitude from individual institutions (Smith, 1988).

The importance in founding the NCAA was that it gave a national focus to the numerous problems facing intercollegiate athletics. The NCAA could not solve problems, but it could produce uniform playing rules for various sports and be a vehicle for discussion. It also produced guidelines for institutions that wanted to bring greater order to their intercollegiate athletics. The object of the NCAA, according to its early constitution was to regulate and supervise college athletics nationally. If an institution wanted to achieve faculty control over athletics, it had the voice of the NCAA behind it. The NCAA guidelines could be used to regulate recruiting practices and the granting of athletic scholarships. The freedom of individual institutions to carry out their own athletic mission was not jeopardized by belonging to the NCAA. The early years of the NCAA were a slow process, moving from the individualism of institutions to the collective control for the good of intercollegiate athletics.

In the half century between the first intercollegiate contest and the formation of the NCAA, the question of the freedom to pursue athletics has been important. Even before intercollegiate athletics, the issue of freedom to participate in sport had been fought between the students, (who looked at the extracurricular as their own domain) and the faculty (who saw the entire collegiate experience under their control). It is ironic that neither the students nor faculty would end up controlling the monster of intercollegiate athletics. The NCAA is a combination of colleges with faculty representation, but the representatives are presidentially appointed rather than chosen by their peers. One can expect the representatives to be more concerned with public image, than with the academic considerations of students (Smith, 1988). One would expect institutional promotion over educational goals (Smith, 1998; Knight, 2001). Thus commercialization and professionalism of intercollegiate athletics is likely to take precedent over concerns for educating individual athletes (Smith, 1998; Knight, 2001). The two most influential groups in 20th century athletics are the alumni and governing boards. This is ironic because neither has been represented in the major inter-institutional organization of big time athletics – the NCAA (Smith, 1988).

As time elapsed, the desire to reform athletics has continued to be a hot topic. One of the most significant regulatory shifts in intercollegiate athletics was the passing of Title IX in 1971. The implications of this legislation have played out gradually over the last 3 decades, but there is no doubt that mandating gender equity has and will continue to have a fundamental impact on intercollegiate sports. Before its passing, the discussion of women in intercollegiate athletics was basically nonexistent. Title IX also greatly strengthened the NCAA. Under the leadership of Walter Byers, the NCAA was able to

gain control of women's athletics from the Association for Intercollegiate Athletics for Women, which had long sponsored and led the fight for women's athletics (Shulman & Bowen, 2001).

Beginning in 1983 the NCAA, which had been seeking to bring about reform in athletics through the American Council on Education, adopted new academic requirements. Beginning in the year 1986, freshmen were required to have an SAT score of 700 and a core GPA of 2.0. This reform was followed in 1992 by Proposition 16, which further regulated the academics of student athletes. The NCAA has continued in an attempt to reform intercollegiate athletics. In 1991, a group of individuals formed the Knight Commission created to suggest potential changes to regulate intercollegiate athletics.

The Knight Commission proposed a "one-plus-three" model: a Coalition of Presidents, directed toward an agenda of academic reform, de-escalation of the athletics arms race, and de-emphasis of the commercialization of intercollegiate athletics. The commission recognized that changes in intercollegiate athletics would require a series of small steps over time. The reform effort must be accomplished by a concerted grass-roots effort by the broader academic community in concert with trustees, administrators and faculty. In the foreword of the report, the commission states "our interest is not to abolish the role of intercollegiate athletics in college and university life, but to preserve it by putting it back into perspective (Knight, 2001)." They describe the problem as

"...an obsession with winning and moneymaking that is pervading the noblest ideals of both sports and education in America, its victims are not just athletes who found the promise of education a sham, but the colleges and universities that participate in an

educational travesty – a farce that devalues every degree and denigrates the mission of higher education.” The problems in higher education today are not vastly different than the generation before. Recruiting has become corrupt, professionals replace amateurs, education is neglected and commercialism reigns (Knight, 2001) .

Although the Knight Commission holds no formal authority, the NCAA has tried to adopt many of its recommendations. The original Knight Commission met in 1991, but it was not until 1996 that the NCAA adopted the most significant of its recommendations. The NCAA voted to replace a governance structure controlled primarily by athletic administrators with a system that put college presidents in charge of all planning and policy activities, including the budget (Knight, 2001). The commission felt strongly that sports at all levels were worth saving. Sports have been a source of immense satisfaction, self-discipline, and achievement for generations of athletes.

The Knight Commission focused on three key areas of intercollegiate sport including, academics, the financial arms race, and commercialization. Academics are at the heart of all educational missions. Colleges and universities are institutions for teaching, learning, and creating knowledge. Big time athletics seem to constantly undermine this core mission (Knight, 2001). Athletic enterprises often operate with little regard for scholastic matters beyond eligibility concerns. The athletes academic performance has little to do with the outcome of the big game, as long as they are eligible to suit up. The graduation rates of the high profile basketball and football programs are abysmal (Knight, 2001). Many college athletic administrators like to point out that the graduation rates of the nonstudent athletes are equally abysmal, but the Knight Commission points out that these nonstudent athletes did not have the benefit of full

scholarships and the often-extensive academic support services extended to student athletes. One reason athletes may struggle is because they are often admitted to institutions where they have no hope of succeeding. They are brought in as performers, not as aspiring undergraduates. Many star performers have ambiguous academic credentials to begin with and develop chronic classroom issues that continue to follow them throughout their academic career. The academic support and tutoring athletes receive while attending college is too often focused on eligibility rather than on guidance toward a useable degree.

The term ‘arms race’ is used to describe the ever-growing amount of spending and building to reach impractical financial goals. Only about 15 % of the Division I institutions operate their athletic programs in the black (Knight, 2001). The vast majority of major basketball and football programs don’t make a profit from their participation in intercollegiate athletics. Athletic directors today come most often from the business world and serve as money managers, trained to maximize revenues. Schools are constantly increasing their athletic budgets in order to appear to compete equally with other schools in their conferences. The gap continues to widen between the haves and have-nots (Knight, 2001). The have-nots are required to sacrifice lower profile sports or siphon funds from the general revenue in order to keep even. Another symptom of the arms race is the salaries paid to the coaches of the successful teams. At more than 30 schools the ‘star’ coach is paid over a million dollars. This is in stark contrast to the average salary of \$84,000 for the fully tenured professor at a public research university (Knight, 2001). This lack of academic connection between the football team and the classroom educator is the fundamental example of corruption in athletic programs.

The commercialization of athletic programs over the past few decades has exploded. Large television contracts, shoe endorsements, and advertising space sold in larger and bigger stadiums are just a few of the examples present in today's athletic programs. With the increase in money from corporations comes increased manipulation. The television stations now determine game times adding television time outs in addition to the ones original to the game. Sports as big business are suitable for the marketplace, but the marketplace is in direct conflict with the values that should matter for higher education (Knight, 2001).

Relevant Research on Academic Issues for Athletes

Throughout history, intercollegiate sport has had proponents and critics. Some believe sports are a university's best feature, whereas others merely appreciate and accept them. Still others find college sports completely irrelevant. Regardless of how people feel about sports in today's college, athletic competition is thoroughly institutionalized throughout American higher education. Arguably, the academics of student-athletes is of the utmost importance, although usually neglected at big time athletic schools (Shulman & Bowen, 2001). The media have flooded the public with information about poor graduation rates, NCAA rule violations, and grievous acts committed by student athletes. The NCAA and athletic programs across the country have attempted to deal with these issues, but the public often does not hear about the success stories. The public is only aware of the constant misconduct by big-time college athletics. Research has attempted to determine the critical issue of why student athletes appear to fail academically, but often this raises more questions than answers (Shulman & Bowen, 2001; Hollis, 1998; Mixon, 1995; Pascarella et al, 1999; Ryan, 1989; and Stuart, 1985).

The Game of Life is an in-depth look at the many factors facing athletic enterprises today (Shulman and Bowen, 2001). The authors examined three different cohorts of student athletes, beginning with a cohort of male athletes from 1951. The next cohort to be examined was from 1976 and included both men and women athletes. The last cohort was from 1989 and, like the 1976 study, included both genders. Examining athletes from three different decades allowed many comparisons not possible by examining a single group of athletes, while enabling many interesting comparisons within each group. The authors also used several institutions from all levels. They looked at eight Division I private universities (Duke, Georgetown, Northwestern, Rice, Stanford, Tulane, Notre Dame, and Vanderbilt), four Division I Ivy League schools (Columbia, Princeton, University of Pennsylvania, and Yale), three Division III universities (Emory, Tufts and Washington – St. Louis), four Division I public universities (Miami, Penn State, University of Michigan, and University of North Carolina), and seven Division III coed colleges (Denison, Hamilton, Kenyon, Oberlin, Swarthmore, Wesleyan, and Williams) and four Division III women’s colleges (Barnard, Bryn Mawr, Smith and Wellesley). They chose to focus on these schools for two reasons: all participate in an athletic culture, and many are considered leaders within higher education. A third reason for focusing on these schools was the selective nature of each institution. This permitted them to compare the nature and effects of radically different kinds of athletic programs without leaving a world of shared academic expectations and requirements.

Although Shulman and Bowen (2001) focused on many critical issues that face intercollegiate athletics today, the academic outcomes are the most relevant issue for this paper. The authors discovered that students who play intercollegiate athletics are

different from the general student population. Since the 1950's, athletes' test scores have diverged more and more from their peers (Shulman & Bowen, 2001). The public is constantly bombarded with graduation rates of the high profile sports of basketball and football. In response to the constant outcry by the public for the rates to improve, the NCAA began in the mid-1980's to track the graduation rates of athletes and students at large Division I institutions and to make the data public (Shulman & Bowen, 2001). In one NCAA study the overall graduation rate for Division IA male athletes was 58 %, with 41 % of male basketball players and 51 % of the male football players graduating within six years (Shulman & Bowen, 2001). One fact to keep in mind is that although these rates are higher or equal to the overall graduation rates for all students, athletes receive tutoring and other special support. The financial barrier is also relieved at scholarship granting institutions.

Shulman and Bowen found that when examining the long-term trends of athletes' graduation rates, the chance a student athlete will graduate has diminished over time. In the 1951 cohort, the overall graduation rate for athletes was 19 percentage points higher than the overall graduation rate for students at large, whereas the 1989 cohort was only 3 percentage points higher than their classmates. Shulman and Bowen (2001) attributed the decreasing percentage points for the graduation rates of athletes to the following idea. The athletes' chance of graduating has increased only modestly over time, whereas increased selectivity of admission has increased at a greater rate. This combined with their classmates' increased focus on claiming a diploma has caused the students-at-large graduation rate to increase much more than the athletes' graduation rate.

Shulman and Bowen (2001) also examined the actual versus predicted student academic performance. When inspecting the actual grades earned by athletes in recent years, they found a far less favorable picture of athletes academic performance. The 1989 athletes in the high profile sports (football, basketball and hockey) had an average grade point average (GPA) that put them at the 25th percentile of their class; whereas students in the lower profile sports (baseball, tennis, crew, golf, etc.) were at average in the 40th percentile. The change with time (from the 1951 and 1976 cohorts) of the overall academic performance of athletes is dramatic. The athlete academic situation at the Division I private universities is worse than at all other institutions where the average class rank is at the 18th percentile. These institutions must attract some of the most capable students in the classroom, while still competing with their rival institutions on the athletic field. Given this dilemma, it is not surprising that over 80 % of the high profile athletes (football, basketball, and hockey) end up in the bottom third of their class (Shulman & Bowen, 2001).

The next question Shulman and Bowen (2001) examined was actual performance versus predicted performance. This is very relevant research for the purposes of this paper. It is interesting to locate where the athletes finished compared to their classmates. It is also important to assess the outcomes based on what might have been expected in the beginning of their respective college careers. Another way to phrase this dilemma is: are athletes living up to their academic potential? Intercollegiate athletes differ from their nonathletic peers in a number of aspects that allowed Shulman and Bowen to examine whether athletes did better or worse than they might have been expected to on the basis of the academic preparation they brought to the campus. Shulman and Bowen used a

multivariate analysis to look at these aspects and to account for these differences. Using companion research, Shulman and Bowen knew that other things being equal, the rank-in-class of students in academically selective schools tends to be higher if students 1) had relatively high SAT scores entering college, 2) majored in the humanities or social sciences, and 3) came from families with high socioeconomic status. Once these factors were taken into account, the authors still found significant differences.

In the 1976 cohort, the authors found that athletes in the high profile sports such as football, men's basketball, and hockey were 10.1 percentile points below the class rank of students-at-large who had the same SAT scores, majored in the same field, and came from the same family background. Performance gaps at the Division I public universities were not statistically significant, which is largely due to the relatively small numbers of athletes at these schools who had SAT scores that overlapped with those of their non-athletic peers. Athletes at these schools came in with appreciably lower test scores than their classmates, and although their grades did not exceed what might have been expected, they didn't fall short either. In the Division I private universities and Division III coed liberal arts colleges, athletes came in with test scores that were high enough to permit comparisons of academic performance with large numbers of non-athletic classmates. In these institutions, significant degrees of underperformance were observed on a consistent basis. By the 1989 cohort, the underperformance observed in the high profile sport of 1976 had spread throughout the lower profile sports as well. In 1989, the mean class rank of the high profile athletes compared to nonathletes had lowered even more than in 1976. The only institutions not to see significant difference for the 1989 cohort were the Division I public universities, where the discrepancy between incoming

admission criteria make comparisons impossible, even more so than with the 1976 cohort. All of these results point to the pervasive problem facing intercollegiate athletics and the academics of these student athletes. Test scores help to predict what students would have been expected to achieve in college, but something is happening to the student athlete that makes this predicted performance in the classroom difficult to achieve.

Some skeptics of student athlete's academic performances attack the preparation these students receive in high school (Shulman & Bowen, 2001; Knight, 2001). Most successful college athletes were also successful athletes well before attending higher education; this may have affected their college preparation (Shulman & Bowen, 2001). Future intercollegiate athletes learn early what is important to them, and this may differ from other high school students who are focused on preparing and graduating from college. Maximizing one's academic potential in high school may be a low priority for students focused on athletics (Shulman & Bowen, 2001). Shulman and Bowen attempted to examine whether college athletics should be 'blamed' for the underperformance of intercollegiate athletics, or if the differences had already existed. They used various aptitude tests, the Achievement Test scores, and high school GPA to examine this question. Adding in this pre-collegiate information does explain some of the underperformance. The rank in class difference for athletes at the Ivy League drops (10.8 to 4.8 percentile points), and the class in rank at the other scholarship schools is also lowered. This evidence would suggest that high school underperformance translates to college underperformance. Although differences in academic achievement at the time of admission to college explain part of the issue, they do not explain it all. Shulman and

Bowen found that even after controlling for high school records, standardized test scores, and other predictors, something is happening to college athletes to cause them to miss the predicted level of achievement in college.

Many different factors have been attributed to the athlete's difficulty with academic commitments and achievement. Some claim time commitment of athletes to their sport is so great, it leaves little time for anything else. Shulman and Bowen attempted to compare athletes academically with nonathletes that also had heavy time commitments. They examined students involved in theater, government, and newspaper editing to see if time commitment could explain this performance gap. What they discovered was that these heavily invested non-athletic students actually finished higher in class rank, and in some cases actually 'over performed'. Of course, many would argue the mental 'time commitment' of playing high profile athletics has no match with those involved in other extracurricular activities. So time commitments for student athletes may harm their academics, but evidence doesn't suggest that the simple idea of time commitment is the cause of underperformance.

Another possible explanation for underperformance is that the culture of sport causes athletes not to take their academics seriously. Psychologists Nancy Cantor and Deborah Prentice found that athletes tend to disidentify with academics. As reported by Shulman and Bowen, Cantor and Prentice concluded that "The culture of athletics is at least in part responsible for students' relatively poor academic performance....Athletic participation somehow exacerbates their academic weaknesses and insecurities."

Educational researchers Ernest Pascarella and others postulate that "the norms of the athletic subculture, when combined with the time commitments of participation, might

function to isolate football and basketball players from the kinds of interaction with diverse student peers and faculty that enrich the intellectual experience of college (Pascarella et al, 1999).” Any of these factors could be confounding variables in the complex issues of student athletes and their academics.

Although the critical issue of why student athletes struggle academically is still not fully understood, researchers must continue the quest to determine how the academics of student athletes can be reprioritized to allow for success. Still up for debate is whether the entire athletic culture in higher education needs an overhaul or whether more services need to be offered to give student athletes the tools to be successful. Much of the literature regarding athletics and academics focuses on the support services provided by different athletic administrations.

Doctoral candidates for dissertation projects do much of the research focusing on academic support. One examined the coach’s perceptions of student services (Sapp, 1997), whereas another asked for the student athlete’s perceptions (Lewis, 1997). Several looked at the services at different levels of play (Hollis, 1998; King, 1998; Lambertson, 1998; and Unruh, 2001). Still another looked at the psychosocial factors of participating in intercollegiate sports (Mickle, 2001).

Sapp (1997) of North Carolina examined the coaches’ perceptions of the academic support provided to the student athletes at the University of North Carolina. A questionnaire was sent to 48 coaches at the university, with 29 of them responding for a response rate of 60 %. The findings of this dissertation indicated that the coaches were pleased with the efforts of the academic support staff and the programs and facilities offered through the Academic Center. The coaches expressed concern about the low

ratio of tutors to athletes, and wanted the ratio increased. They also expressed their desires for more computers and study rooms when the facilities are expanded. They wanted more private study rooms built for tutoring and group study sessions.

Interestingly enough, although the coaches seemed mostly positive about the Academic center and its services, they rarely sent their players to Academic counselors for athletes dealing with extracurricular problems. They preferred to send them to the campus health center. Also, the coaches felt that they were more responsible for the academic progress of their players than were the academic counselors. The coaches displayed a high response rate in support of players missing practice for study reasons and encouraged players to study on road trips. The service where there was coach disagreement was in the requirement of a mandatory study hall. Many felt mandatory studying should be enforced on an individual basis, whereas others wanted it removed completely.

In another dissertation, Lewis (1997) looked at student-athlete perceptions regarding the academic support services at the University of North Carolina. She wanted to determine the current and future needs of student athletes regarding the academic support services offered at the university. Most athletes viewed the support services as beneficial, although the men in the revenue-generating sports believed the primary concern was to merely assist them in passing their courses. Students rated the freshman orientation program low and felt the staff in the academic center should reevaluate the program. Athletes also responded that more computers were needed in the center. The student athletes used in this study were only a sample of the total student athletic population at the university. The sample was taken from those who had attended the team meetings during the spring semester of 1996. Surveys were given out to 393 of the

645 student athletes, excluding men's basketball. The students responded to the survey during the team meeting, so all questionnaires were returned. Results from this dissertation showed that student-athletes still tend to feel that the primary concern of the academics center staff is merely to assist athletes in passing their courses. The athletes also expressed the need for more computers, private study rooms, and more study hall hours. They showed a large demand for extended hours, especially on the weekends.

King (1998) examined characteristics of student athlete academic assistance programs within the NAIA. Schools belonging to the NAIA are not part of the NCAA and tend to be smaller in the overall size of the student body. King wanted to examine what these schools were doing in the area of specialized academic advising programs. He used a survey to investigate the philosophical beliefs, characteristics, and practices that prevail in the area of academic support and retention programs within the NAIA. King sent the survey to all 360 schools belonging to the NAIA listed in the membership directory. Only 354 schools remained eligible to participate after some indicated they were no longer members of the NAIA. Respondents from 239 schools returned the survey for a total response rate of 68 %. Of these, 203 did not have a specialized program for student athletes, whereas 36 did have some program in existence. Most of the 203 schools without student athlete assistance programs referred their athletes to the academic support provided in the general student body. Only 12 reported they had no such general academic support program in place at their college. Most of the schools (61.1%) claimed not to receive funds from the athletic departments to provide academic support services to student athletes, because their mission was to provide for all students at the college.

Most programs also employed a large number of peer tutors rather than staff members for tutoring purposes.

Lambertson (1998) did a study for her master's degree comparing the student athlete academic support programs at schools in the Mid-American Conference. She was hoping the study would provide insight on how to run a more comprehensive student athlete academic support program. A survey was sent to 11 of the 12 directors of the student athlete academic support programs within the conference. The study attempted to determine how these support programs correlated with the graduation rate of the student athletes at their respective institution. Although 10 of the institutions had separate academic support for athletes, some were deficient in offering support which negatively impacted graduation rates. The school that did not require study tables had the lowest graduation rate, whereas the schools that did have study tables averaged a 14 % higher graduation rate. Results also indicated that early assessment of student athletes allows academic advisors to decide what support programs will be most useful to the individual athletes.

At Boston University, Leah Hollis (1998) investigated the factors influencing student athlete graduation rates in higher education. Her major objective was to determine the relationship between graduation rates and various academic support programs that commonly exist at NCAA Division I institutions. She examined the relationship between graduation rates and characteristics of support services. The study focused mainly on the department heads in student athlete support programs. She surveyed the primary department heads at 166 Division I institutions that are financially active members of the N4A. She waited until at least 30 % of the original mailed surveys

were returned. Hollis's dissertation had a practical segment, which was based on the levels of service. The practical segment results showed that levels of service do not have a significant impact on the student athlete graduation rates. In fact, institutions with lower graduation rates tended to score higher in the practical segment of her survey. Resources such as budget, human resources, and space did not prove to be statistically significant variables in the multiple regression tests. After further investigation, Hollis found that academic preparedness was a key component that positively affects student athlete graduation rates. She concluded that the major obstacle in preventing higher graduation rates is the poor academic preparation of first-year student athletes. She postulated that in "order for institutions to meet the responsibility to reconstitute equal opportunity in education for student athletes, these institutions need to address the poor academic preparation of some student athletes (Hollis, 1998)."

Unruh (2001) examined department practices that relate to the academic performance and persistence of student athletes. The sample for his study included men's basketball and football players from 11 Division I universities in the Big Sky, Big Ten, Big 12, Big West, PAC 10, and WAC Athletic Conferences. The student athlete sample was stratified to include only football and men's basketball players who were of junior or senior status and who had been enrolled at that institution for a least one year. At each institution, a minimum of three men's basketball players and a minimum of 10 football players were selected. Unruh also randomly sampled coaches (n=39), administrators (n=25), and faculty (n=8). He used a cross-sectional self- designed survey to gather information for his research questions. The survey was also developed to be self-administered. Unruh found that the type of institution had a strong correlation with

whether or not faculty supported student athlete academic and athletic endeavors. He found high academic performance and high persistence institutions scored the highest on showing support of student athlete academic and athletic endeavors. This result supported earlier research in which Unruh had discovered stating that student-faculty interactions and relationships strongly correlated with academic performance and persistence of students. The high academic performance and high persistence institutions also showed that the athletic department's positive relationship with the academic side were related to the student athlete's performance and persistence. Unruh's research demonstrated that the environment created by an institution influences the performance and persistence of student athletes.

Mickle (2001) attempted to analyze the psychosocial development of college student athletes by surveying the entire student athlete population at the University of Massachusetts at Amherst. She wanted to investigate whether female athletes have achieved a higher level of psychosocial development than male athletes, and whether athletes anticipating a professional career would have a lower ability in establishing and clarifying purpose than those athletes who are not. She also wanted to discover whether athletes participating in team sports would be better in achieving mature interpersonal relationships than those in individual sports, and whether athletes who have obtained a higher GPA would be expected to have a better ability at establishing and clarifying purpose than would those with a lower GPA. She found a strong correlation between GPA and developmental level, indicating a connection between cognitive development and psychosocial development. Research shows that a break in this connection could impact identity formation (Chickering, 1993) Mickle's study demonstrated that athletes

with lower GPAs are at a lower level developmentally, which could impact their ability to establish an identity or develop mature relationships. She did not find evidence supporting the hypothesis that women are at a higher level of psychosocial development than men. The only area of psychosocial development that was significantly different by gender was the ability to manage interpersonal relationships. The hypothesis dealing with athletes who anticipated a professional career lacking the ability to establish and clarify purpose was substantiated by her analysis. The hypothesis dealing with team sports versus individual sports was not substantiated. In fact, the mean was slightly higher for individual sport athletes in achieving mature interpersonal relationships. The results of this dissertation provides some evidence that student athletes need to be treated as individuals, while recognizing the huge impact athletics have on their lives.

Some college student athletes have attracted a large amount of attention from the media, whether for their performance in the athletic arena or the classroom. Simons, Rheenen, and Covington (1999) looked at how student athletes are academically motivated. Most student athletes are highly motivated to succeed in the athletic domain, but some of the most visible student athletes lack the motivation to succeed in the classroom. Student athletes are usually required to devote upwards of 25 hours a week to their sport while in season, deal with injuries and the fatigue from their athletic participation, as well as miss countless classes. These factors hinder the student athlete's performance in the classroom, (Simons, Rheenen, and Covington, 1999). The attributes of athletic success--hard work, self-discipline, perseverance, determination, concentration, and the ability to stay focused--naturally seem applicable to academic success. Some athletes, especially football and men's basketball players, seem less

willing to make this commitment and demonstrate an apparent lack of motivation to succeed in the classroom (Simons, Rheenen, and Covington, 1999). On the other hand, female athletes and other non-revenue generating sport athletes seem completely able and willing to make this commitment (Simons, Rheenen, and Covington, 1999).

Simons, Rheenen, and Covington (1999) believed the self-worth theory of achievement motivation provided a motivational explanation that can contribute to the understanding of the discrepancy between academic and athletic motivation. According to Covington (1992), self-worth theory “assumes that the search for self-acceptance is the highest human priority and that in school, self-acceptance comes to depend on one’s ability to achieve competitively.” Athletes are usually quite competitive and some fear failure so much that if they can’t compete, they may avoid failure all together. This may give the impression that the athlete lacks ability or competence. On the other hand, failure following a lack of effort does not reflect negatively on one’s ability and self-worth. Lack of effort provides an excuse for failure that leaves the perceptions of ability and self-worth intact (Simon, Rheenen, & Covington, 1999). Covington has proposed four motivational types: Success Orientated, Overstrivers, Failure-Avoiders, and Failure-Acceptors. Covington suggests that understanding these motivation types may help predict academic success for student athletes. Success Orientated students are highly motivated to succeed without being afraid of failing. They are intrinsically motivated, and they work hard to become successful students. Failure spurs them on to more effort in future endeavors. Overstrivers fear failure and this fear leads them to strive very hard to succeed. Their success is fragile though, because small setbacks can have lasting effects due to the emotional significance they place on them. Failure-Avoiders often

have low self-worth due to a history of academic failure. They are negatively motivated by the fear of failure and the anticipation of shame. They often engage in self-handicapping behaviors such as procrastination and test anxiety that provide an excuse for poor performance. Failure-Acceptors are not particularly attracted to success and aren't concerned about failing either. They do not try very hard and are not really interested in academics; they may have given up entirely on the academic side of college and focused primarily on athletics.

Simons, Rheenens, and Covington (1999) surveyed 361 student athletes at the University of California at Berkeley during the 1993-1994 academic year. The survey used 300 Likert-type scale items that measured cognitive, non-cognitive, and background factors affecting academic and athletic motivation of student athletes. Not surprisingly, results showed that both Success Orientated student athletes and Overstrivers, who are highly motivated to succeed academically, demonstrated higher academic performance in high school and at college than the other two groups. Success Orientated athletes scored the highest in academic self worth and lowest in self-handicapping excuses. Overstrivers scored high in their motivation to avoid failure and lower in their academic self-worth. Failure-Avoiders were found to be strongly motivated to avoid failure at the expense of striving for success, had low academic self-worth, high self-handicapping excuses, and low intrinsic motivation. Failure-Acceptors had no motivation to succeed academically or to avoid failure.

The athletic culture may further inhibit athletes from succeeding. The motivation to succeed academically is further weakened by the greatly publicized accounts of athletes failing in academics or leaving school early to launch professional careers. For

the Failure-Acceptors and Failure-Avoiders, their only academic motivation may be to remain eligible to play their sport. Furthermore, superior athletic performance is recognized, encouraged, and rewarded, which leads to less interest in academics and the resultant failure. Revenue athletes who are Failure-Avoiders and Failure-Acceptors are the ones most likely to exhibit the discrepancy between their athletic and academic motivation. Efforts need to be made to help student athletes increase their view of self-worth and to see themselves as legitimate students as well as superior athletes.

Slowly the body of evidence on the impact of athletic participation by student athletes in college is increasing. Some reports suggest participation in intercollegiate athletics is negatively associated with such college outcomes as involvement, overall college experience satisfaction, career maturity, clarity in educational plans, and moral judgment (Covington, 1992; Richards & Aries, 1999; Ryan, 1990, Shulman & Bowen, 2001; Simons, Van Rheenen, Covington, 1999). One of the most difficult problems inherent in research on the educational impacts of intercollegiate athletic participation is separating the effects of recruitment from those of socialization (Pascarella et al, 1999). A researcher must take into account the background or precollege characteristics in order to compare the differences between athletes and nonathletes in college. Various evidence has indicated that athletic participation is linked with the overall satisfaction with the college experience and with the motivation to persist in college and attain a degree (Pascarella et al, 1999; Simon, Rheenen, & Covington, 1999; Richards & Aries, 1999; Mixon, 1995; Ryan, 1989). Unfortunately, the body of evidence on the intellectual consequences of intercollegiate athletics is mixed at best. Many researchers have looked at the academic performance of athletes, but have analyzed data from the late 1960's

through the 1980's to assess the student-athlete's classroom success (Smith and Dizney, 1966; Stuart, 1985; Pascarella and Smart, 1991; Ryan, 1989). As Shulman and Bowen (2001) reported in their research, the athletes of the 1970's were vastly different from the athletes of the 1990's. Therefore, to continue to do in-depth analysis on the athletes from the 1970's doesn't make sense. Extensive data sets on student athletes are difficult to acquire, so researchers must analyze available data. For this reason, it is very difficult to begin the necessary research needed to examine the critical issue of why student athletes are not succeeding in the classroom.

Controlling for confounding variables such as precollege test scores, ethnicity, academic motivation, full or part-time employment, and institutional type makes comparisons between athletes and nonathletes difficult. Differences in academic achievement may be largely due to the differences in academic experiences. Many questions come to mind when examining the academics of intercollegiate athletes. First, are the negative consequences of academics for student athletes limited to the large revenue sports or are other sports affected as well? Second, are the effects of college athletics on student athletes' academic performance limited to men? Third, are the effects of participation in college athletics different for students with differing background characteristics?

Pascarella et al. (1999) attempted to answer this question by examining student athletes from 18 different institutions across the country. Their sample only contained second and third year student athletes, expanding upon earlier research that focused on freshman student athletes. The initial data collection was in the fall of 1992 with 3,331 student athletes. The data collected included a precollege survey and, Form 88A of the

Collegiate Assessment of Academic Proficiency (CAAP) developed by the American College Testing Program (ACT) that assesses general skills typically acquired during the first two years of college. The authors also administered reading comprehension, mathematics, and critical thinking tests. The first follow-up data collection was in the spring of 1993. The researchers administered the CAAP, The College Student Experiences Questionnaire (CSEQ), and a follow-up instrument designed to measure a wide range of students' classroom and out-of-classroom experiences. For the first follow-up they had a 73% response rate. Pascarella et al. did a second follow-up in the spring of 1994. The participants filled out information similar to the first follow-up and also completed a test assessing their science reasoning and writing skills. The second year male response rate was 65%, and the second year female response rate was 68%. The authors also did a third follow-up in the spring of 1995 using similar surveys and testing modules as in the previous data collections. The third year male response rate was 69%, and the female response rate was 71%. For analysis purposes, the two end-of-second-year variables were scores on the CAAP science reasoning and writing tests, whereas the two end-of-third-year variables were scores on the CAAP reading comprehension and critical thinking tests. Two categories of control variables were also considered. Precollege characteristics included measures of precollege cognitive development, race/ethnicity, socioeconomic status, precollege motivation, and gender. Student experience in college was the other control variable and included things such as total credit hours completed, average number of hours a week spent studying, average number of hours spent working, and on or off-campus residency. The researchers also

used an estimate of the general student body's cognitive development as a control variable.

Male athletes in non-revenue generating sports had end-of-second-year science reasoning and writing skills that were not significantly different from those of nonathletes; however, football and basketball players had scores that were significantly lower than those of nonathletes. Female athletes did not differ significantly from female nonathletes when potential confounding influences were taken into account (Pascarella et al., 1999). Third year results were consistent with those from the second year. Non-revenue male athletes' reading comprehension and critical thinking scores were not significantly different from nonathletes, whereas football and basketball players had significantly lower scores than nonathletes. Female athletes again did not differ significantly from female nonathletes. Overall this tends to suggest that the net influence of athletic participation on end-of-third-year reading comprehension and critical thinking is not explainable by differences between athletes and nonathletes in their experience of college (Pascarella et al., 1999). When concluding their analysis the authors found little evidence that participating in intercollegiate athletics cognitively penalizes women. They did find that male basketball players and football players appear to have difficulties with cognitive development into the second and third year of college, whereas male athletes in non-revenue sports develop the same cognitive ability as their non-athletic peers. The findings of Pascarella et al. suggest that the negative impacts on men in intercollegiate basketball and football are not entirely explainable by different experiences in college. Rather, the sports themselves may be the cause for this lack of cognitive development. One possibility is that competing in these large revenue producing sports may absorb so

much physical energy, that student athletes have few resources left to make intense cognitive investments in their education (Pascarella et al., 1999).

There has been some research done at the Division III level that disputes the claim that athletes struggle academically. Richards and Aries (1999) examined the consequences of participating in intercollegiate athletics for 219 seniors attending a Division III institution. They realized that the role of student and athlete compete for each student's scarce resources when it comes to motivation and ability to succeed both on the playing field and in the classroom. The authors wanted to see if the time demand on athletes played a role in their performance academically. The researchers also wanted to examine what difficulties were posed by membership on athletic teams, the effects of athletic participation on academic success, and the effect of participation on their ability to have involvement with other extracurricular groups. Richards and Aries (1999) found that athletes and nonathletes did not differ in the amount of hours they spent in a typical week studying and attending class. Not surprisingly, athletes did devote significantly more hours to extracurricular activities than did the general student body. Furthermore, the researchers found that participation in athletics made it easier to receive invitations to join other extracurricular groups on campus, but the athletes had significantly more difficulty in finding time to attend on-and off-campus events. Overall, this study revealed that Division III athletes make more than double the time commitment to extracurricular activities, graduate with similar grade point averages, and are as involved in most aspects of campus life as nonathletes (Richards & Aries, 1999).

Conclusions

A typical college student is admitted to college on the potential to benefit from an institution's programs and educational opportunities. In many institutions, especially at the Division I level, student athletes are admitted for their potential to provide athletic benefits for the institutions. This conflict of interest has been in higher education since athletics first became a fixture among colleges and universities in America. The concept of amateurism was a British ideal that did not work with the founding of democracy in a newly formed country that celebrated individual triumph. The problems associated in the 21st century with big-time athletic enterprises existed when intercollegiate athletics were first formed, but unsuccessful resolution of the issues then has caused them to boil under the surface and continue to escalate. Student athletes in the revenue generating sports at some of the most successful universities are rarely expected to be stellar in the classroom, as long as they display their skills on the playing field. Athletes are chronically underprepared when they enter college, where the problems become exacerbated by the time demand of athletics and the culturally approved stereotype of the 'dumb jock'. Thus, the underprepared athletes attend college classes filled with adequately prepared nonathletic peers and find themselves in a contest that no amount of athletic talent can influence. They face a diminished chance of experiencing success and victory, but instead have a heightened chance of defeat (Kramer, 1996).

The research so far on the academic implication of participating in intercollegiate athletics is mixed at best. One reason for this is the difficulty in controlling all the possible confounding variables involved in an investigation of student athletes and the effects of their athletic participation on academics. Another reason is the differing levels

of athletic participation. There are NAIA schools, Division I, II and III institutions and all of them differ in their selectivity of students for admission. Much of the current research focuses on Division I institutions that are highly selective in their admission criteria, making statistical comparisons between the highly capable general study body and the less prepared student athlete difficult. Shulman and Bowen (2001) were unsuccessful in finding a sufficient number of student nonathletes at large Division I public institutions who were academically similar to student athletes,. Research on the Division III institutions, where athletic scholarships are not offered, have shown that participation in intercollegiate athletics is associated with a high level of satisfaction with the overall college experience, motivation to earn a college degree, and the development of interpersonal skills and leadership abilities (Ryan, 1989). Research is needed at institutions that have enough comparable student nonathletes, to examine the effects of students' participation in intercollegiate athletics. Only after this research has been conducted can we hope to begin the process to examine the critical issue of why student athletes struggle academically.

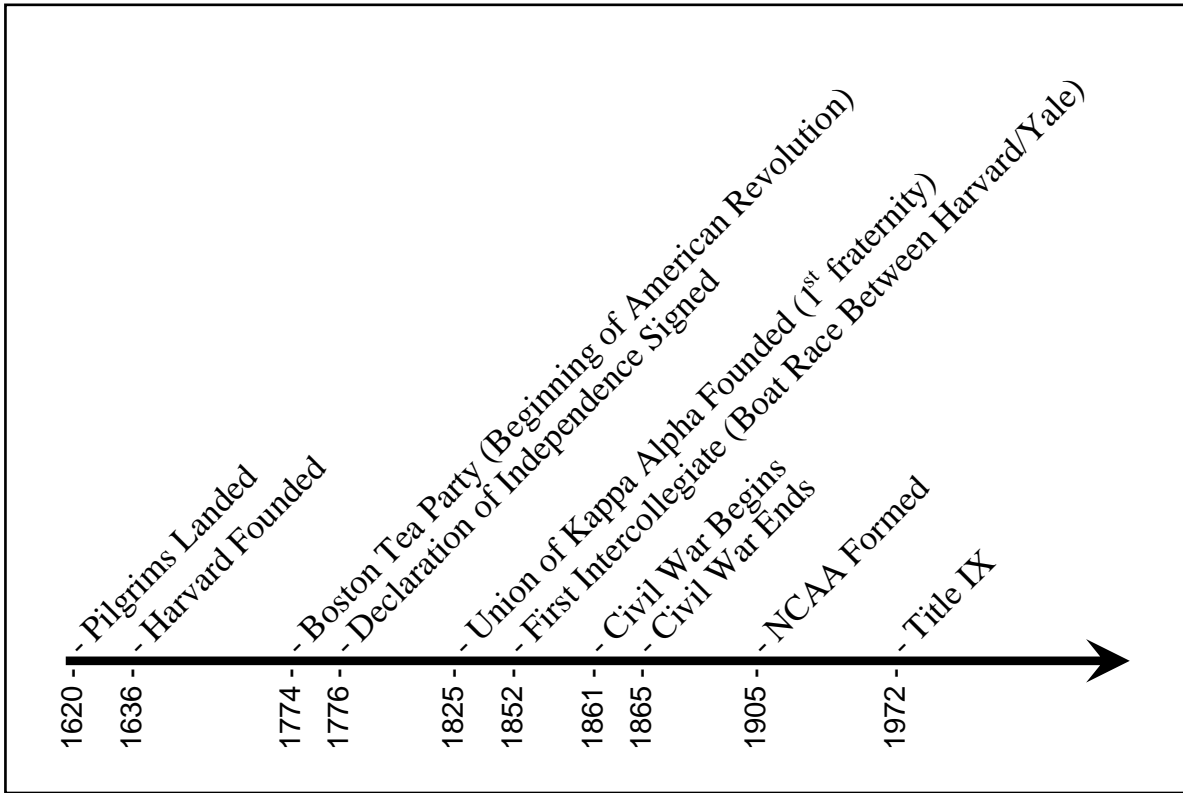


Figure 1 Historical Timeline

Chapter Three

Methodology

Participants

Archival data from all students who graduated from Kansas State University between spring 1997 and the spring of 2003 were used in this analysis. Participants' information was compiled through the office of Educational and Personal Development (EDP), which uses the University's Student Information System (SIS) to gather data. Data gathered for each participant included graduating high school GPA, ACT composite score, graduating GPA, gender, ethnicity, athletic status (athlete specific sport/non-athlete), and primary major at graduation. The participants' social security number (SSN) was also collected for coding purposes.

Apparatus

For the purpose of this study, a database spreadsheet with the participants' information gathered from the SIS database was used. The information stored within the SIS database system is the university's live database maintained for student records on campus. The database contains various information on students, including contact information, admission test scores, credit hours earned, and so forth. The EDP office uses the information gathered from the SIS system to generate point-in-time history tapes for end of Registration, end of semester, and grade reporting. EDP staff uses these historical tapes to generate reports for various academic and administrative departments on K-State's campus, area high schools, community colleges, and the state legislature. Data from the Freshman/Transfer cohorts are used primarily used to track and study K-

State student retention, and to gather the variables requested for this study. The SIS database is a flat file, which uses the SAS statistical software package programming language, and resides on disk access on the K-State mainframe computer. Each fall the EPD office creates a cohort database to track the academic progress of the entering freshman and new transfer students. Each cohort is updated with academic information every succeeding spring, summer, and fall for a period of 10 years for each cohort database. The EDP office is currently maintaining the Fall 1993 through Fall 2003 cohort. A programmer from the EDP office is responsible for generating the requested reports on all data accessed from the SIS system, using the SAS programming language. The limitations to the SIS database are that it is a historical point-in-time only. It is not accessible on-line and if changes or corrections are made to the data elements, those changes will not be reflected in the existing database.

Procedure/Analysis

Several predictor variables were examined in this research: gender, high school GPA, ACT composite score, athlete status (athlete, nonathlete), and type of sport (high profile, low profile). A series of hierarchical regression analyses were conducted with college graduating GPA as the criterion variable. Hierarchical regression was chosen because it was similar to Shulman and Bowen's (2001) methods and because we wanted to examine variance explained in college graduating GPA beyond high school GPA and ACT score.

The first analysis was conducted using data from all students (athletes and nonathletes) to examine the interaction of ACT composite score, high school GPA, and

athletic status in predicting the college graduation GPA. The hierarchical steps were as follows:

Step 1: ACT

Step 2: High school GPA (HSGPA)

Step 3: Athletic status (Athlete vs. non-athlete)

Step 4: ACT x HSGPA

Step 5: ACT x Athletic Status (A)

Step 6: HSGPA x A

Step 7: ACT x HSGPA x A

This analysis was conducted on all students, to determine whether high school GPA or ACT interact with athletic status. We would expect some interaction due to NCAA mandated rules on reaching a minimum ACT score and graduating high school GPA in order to be eligible to participate in intercollegiate athletics.

A second hierarchical analysis was conducted on athletes only for the purpose of testing the three-way interaction between ACT score, high school GPA, and type of sport in which the student was participating. The steps followed in this hierarchical analysis were as follows:

Step 1: ACT

Step 2: HSGPA

Step 3: Type of sport (S)

Step 4: ACT x HSGPA

Step 5: ACT x S

Step 6: HSGPA x S

Step 7: ACT x HSGPA x S

This analysis was conducted on athletes only, so one might expect a greater interaction between ACT and high school graduation with respect to the athlete's chosen sport. Previous research has determined that historically the "high" sports tend to have a less academically prepared student than the "low profile" sports. Football and men's basketball have had a trend of underprepared student athletes, whereas volleyball, golf, and tennis traditionally have better academically prepared students.

A third analysis including athletes only, investigated the three-way interaction of gender by ethnicity by sport. The steps followed for the third analysis were similar to the previous two.

Step 1: Gender (G)

Step 2: Ethnicity (E)

Step 3: Sport (S)

Step 4: G x E

Step 5: G x S

Step 6: E x S

Step 7: G x E x S

Again these analyses included student athletes only. We expected both gender and ethnicity to play a small role in the chosen sport. The interaction would largely be seen in gender, due to most sports being gender specific, such as football, men's and women's basketball and so forth.

In addition to the hierarchical analyses, a trend analysis was conducted for college graduating GPA and graduation rates across the 5-year period. Mean GPA for high- and low-profile sports were also generated.

A correlation matrix was also generated on all regression equations for all years examined.

Chapter Four

Introduction

Several predictor variables were examined in this study: student gender, high school GPA, ACT composite score, athlete status, profile level of the sport (high versus low), and student ethnicity. The criterion variable was student GPA at graduation. A series of hierarchical regression analyses were conducted with college graduating GPA as the criterion variable. The first analysis was conducted using data from all students (athletes and nonathletes) from the 1993 and 1994 groups to examine the interaction of ACT composite score, high school GPA, and athletic status in predicting the college graduation GPA. A hierarchical regression analysis was conducted on GPA with the order of entry being the three main effects first: ACT composite (ACTC), high school grade point average (HSAVG), and athletic status (ATH); followed by three two-way interactions, ACTC x HSAVG, ACTC x ATH, HSAVG x ATH; and the three-way interaction of ACTC x HSAVG x ATH. Collinearity diagnostics indicated substantial redundancy in variance explained between ACT and HSAVG. Therefore, the decision was made to include only ACT in the analyses because of its greater reliability relative to HSAVG.

A second hierarchical analysis was conducted on athletes only from all groups (1993, 1994, 1995, 1996, and 1997) for the purpose of testing the interaction between ACTC score and level of sport. Sports were divided into high profile teams and low profile teams. High profile sports consisted of football and men's basketball; all others were considered low profile. A third analysis examined the following variable ordering:

ACT composite (ACTC) and type of sport (S); followed by the two-way interaction, ACTC x S.

The third analysis again includes only athletes from all years and investigates the three-way interaction of gender by ethnicity by sport. The steps followed for this hierarchical regression analysis were similar with the order of entry being the three main effects first: gender (GD), ethnicity (ETH) and sport (SPORT) followed by three two-way interactions, GD x ETH, GD x SPORT, ETH x SPORT and the three-way interaction GD x ETH x SPORT.

In addition to the hierarchical analyses, a trend analysis was conducted for college graduating GPA and graduation rates across the 5-year period. Mean GPA for high profile and low profile sports were also generated. Correlation matrices were also generated for each regression equation.

Results

Because of the number of analyses conducted, Type I error rate was set at .01. If a variable did not explain at least 1% of the variance in the dependent variable, it was not considered substantial enough to warrant comment.

The first analysis, conducted on the 1993 cohort, involved six predictors of graduating GPA. A hierarchical regression analysis was conducted on GPA with the order of entry being the main effects first: ACT composite (ACTC), and athletic status (ATH); followed by a two-way interaction, ACTC x ATH.

On the first step, ACTC explained a significant proportion of the variance in GPA, $F(1,1447) = 363.28, p < .0001, MSe = .17, R^2 = .20$. The remaining variables were considered nonsignificant because they explained less than 1% of the variance.

This analysis was replicated in the 1994 through 1997 cohorts revealing the same results as in the 1993 cohort. Table 1 presents the results of those analyses. The results indicated that athletic status explained no significant variance in graduating GPA beyond that already explained by ACT composite. This suggests that participation in a sport was not related the overall grade point average substantially beyond what is explained by the students' previous academic achievements.

Table 1 Hierarchical Regression Analyses Predicting Graduating GPA

<i>Hierarchical Regression Analyses Predicting Graduating GPA</i>					
Dependent variable (<i>change in R² value/change in F value</i>)					
Step	1993 cohort	1994 cohort	1995 cohort	1996 cohort	1997 cohort
ACTC	.200/ 363.13**	.227/ 439.94**	.250/ 518.51**	.214/ 401.01**	.238/ 495.85**
ATH	.000/ 0.00	.000/ <1	.000/ <1	0/ <1	0/ <1
ACTC X ATH	.000/ <1	.000/ <1	.000/ <1	0/ <1	.000/ <1

* $p < .05$
 ** $p < .0001$

The 1993-1997 cohort data were also used in the second analysis. The data were analyzed using the same dependent variable of graduating GPA, with the predictors being ACTC, and type of SPORT (high profile vs. low profile). No consistent statistical significance was found for the two-way interaction of ACTC x SPORT. The 1995-1997 cohorts had a significant main effect for ACTC. Table 2 summarizes the number of High

Profile athletes versus Low Profile athletes, and Table 3 summarizes the R² Change and F Change values.

Table 2 Total number of athletes per year in high profile versus low profile sports

	1993	1994	1995	1996	1997
High Profile	27	28	31	32	37
Low Profile	31	23	31	43	61

Table 3 Hierarchical Regression Analyses Investigating Interaction of Sport on Predicting Graduating GPA

<i>Hierarchical Regression Analyses Investigating Interaction of Sport on Predicting Graduating GPA</i>					
Dependent variable (R ² value change/F value change)					
Step	1993 cohort	1994 cohort	1995 cohort	1996 cohort	1997 cohort
ACTC	.062/ <1	.194/ 7.46*	.225/ 5.76*	.150/ 7.08*	.273/ 21.35**
SPORT	.001/ <1	.049/ 1.91	.01/ <1	.064/ 3.14	.003/ <1
ACTC X SPORT	.026/ <1	.024/ 1.51	.000/ <1	.001/ <1	.013/ 1.08

*p < .05
** p < .0001

The third analysis also included athletes only from all the years 1993-1997 and investigated the three-way interaction of gender by ethnicity by sport. Virtually no statistical significance was found for any variable or interaction; only the 1994 and 1997 cohorts had significant main effect for gender (GD). The values for R² Change and F Change are shown in Table 4.

Table 4 Hierarchical Regression Analyses Investigating the Interaction between Sport and Ethnicity

Step	Dependent variable (R^2 value/number of subjects)				
	1993 cohort	1994 cohort	1995 cohort	1996 cohort	1997 cohort
GENDER (GD)	.0097/27	.1666/48*	.0802/44	.1089/49	.0955/64*
ETHNICITY (ETH)	.223/ 6.975*	.009/ <1	.073/ 3.554	.084/ 4.792	.039/ 2.739
SPORT	.017/ <1	.004/ <1	.018/ <1	.018/ 1.046	.007/ <1
GD X ETH	.018/ <1	.018/ <1	.005/ <1	0/ 0	.006/ <1
GD X SPORT	.018/ <1	.002/ <1	.052/ 2.559	.014/ <1	.003/ <1
ETH X SPORT	0/ 0	0/ 0	0/ 0	.027/ 1.581	.002/ <1
GD X ETH X SPORT	0/ 0	0/ 0	0/ 0	0/ 0	.011/ <1

* $p < .01$
** $p < .001$

In addition to the hierarchical analyses, the mean GPA was generated for all High Profile athletes and Low Profile athletes across the 5-year period. Table 5 contains the mean GPA for both sets of athletes with ranges and standard deviations for each cohort. T-tests were conducted within each cohort year to make comparisons between the high profile and low profile GPA's. While across all years low profile athletes had higher GPA's than high profile, only 1996 was significant with $t(49) = -2.196, p < .05$. There were no other significance findings within or across years.

Table 5 Statistics for High Profile athletes and Low Profile athletes across the 5-year period

	1993	1994	1995	1996	1997
High Profile					
Mean GPA	2.858	2.813	3.088	2.875	3.075
# of subjects	11	19	14	21	24
Std. Dev.	0.462	0.4358	0.5915	0.5225	0.4016
Minimum	2.194	2.074	2.183	2.138	2.271
Maximum	3.562	3.5	4.0	4.0	3.975
Low Profile					
Mean GPA	3.054	2.987	3.146	3.176	3.18
# of subjects	16	29	30	28	40
Std. Dev.	0.495	0.4953	0.4659	0.4367	0.4413
Minimum	2.11	2.0	2.085	2.393	2.209
Maximum	4.0	3.934	4.0	3.95	3.973

A correlation matrix was also generated for each cohort year with the results summarized in Table 6. Overall ACT-composite had the highest correlation with the dependent variable of college graduating GPA. We were only able to conduct a correlation matrix for ethnicity with sport for 1993 (correlation matrix = -0.30853, prob > r = 0.0497 and a sample size of 41) and a correlation matrix for ethnicity with GPA for 1993 (correlation matrix = -0.46300, prob > r = 0.0150 and a sample size of 27).

Table 6 Correlation Matrix for College Graduation GPA, ACT-Composite, Athletic Status and Gender

	1993	1994	1995	1996	1997
GPA with ACT-C <i>correlation coefficient</i> <i>prob > r</i> <i>sample size</i>	0.449 <.001 1449	0.4716 <.0001 1543	0.4994 <.0001 1558	0.46221 <.0001 1478	0.48792 <.0001 1589
GPA with ATH <i>correlation coefficient</i> <i>prob > r</i> <i>sample size</i>	-0.04728 0.0638 1538	-0.06184 0.0132 1606	-0.01488 0.5502 1615	-0.03697 0.1469 1541	-0.02045 0.4077 1641
ACT-C with ATH <i>correlation coefficient</i> <i>prob > r</i> <i>sample size</i>	-0.03005 0.1361 2462	-0.03607 0.0675 2571	-0.02779 0.1526 2652	-0.01695 0.3969 2500	-0.0431 0.0242 2736
GD with ACT-C <i>correlation coefficient</i> <i>prob > r</i> <i>sample size</i>	0.07723 0.0001 2462	0.5893 0.0028 2571	0.09908 <.0001 2652	0.0574 0.0041 2500	0.07889 <.0001 2736
GD with GPA <i>correlation coefficient</i> <i>prob > r</i> <i>sample size</i>	-0.09149 0.0003 1538	-0.16857 <.0001 1606	-0.17219 <.0001 1615	-0.18959 <.0001 1541	-0.1627 <.0001 1641

Chapter Five

Discussion and Conclusions

Summary

A typical student is admitted to college for the potential to benefit from an institution's programs and educational opportunities. In many institutions, especially at the Division I level, student athletes are admitted for their potential to provide athletic benefits for the institutions. This conflict of interest has been in higher education since athletics first became a fixture among colleges and universities. The concept of amateurism was a British ideal that did not work with the founding of democracy and a society that celebrated individual triumph. The problems associated with 21st century big-time athletic enterprises also existed when intercollegiate athletics were first formed. The unsuccessful resolution of these issues has caused them to simmer under the surface and begin to boil. Student athletes in revenue-generating sports at some of the most successful universities are rarely expected to be stellar in the classroom, as long as they display their skills on the playing field (Shulman & Bowen, 2001).

Athletes are chronically underprepared when they enter college. The problems become exacerbated by the time demand of athletics and the culturally approved stereotype of the 'dumb jock' (Lambertson, 1998; Lewis, 1997; Mixon, 1995; Pascarella, 1991; Pascarella, 1999; Shulman, 2001; Stuart, 1985; & Unruh, 2001). Thus, underprepared athletes attend college classes filled with adequately prepared nonathletic peers and find themselves in a contest that no amount of athletic talent can overcome (Shulman & Bowen, 2001). They face a diminished chance of experiencing success and victory, but instead have a heightened chance of defeat (Kramer, 1996).

Research on the academic implications of participating in intercollegiate athletics is mixed at best. One reason is the difficulty in controlling all of the possible confounding variables involved in an investigation of student athletes and the effects of their athletic participation on academics. A second reason is differing levels of athletic participation within the different divisions. The third reason for difficulty in accessing information, one which may have the greatest impact, is difficulty in accessing the large databases holding much of this information. Cumbersome databases and missing data make the extraction of information for statistical comparisons all but impossible. Much of the current research focuses on Division I institutions that are highly selective in their admission criteria, making statistical comparisons between the highly capable general student body and the typically less-prepared student athlete difficult. Shulman and Bowen (2001) were unsuccessful in finding a sufficient number of student nonathletes at large Division I public institutions who were academically similar to student athletes. Research on the Division III institutions, where athletic scholarships are not offered, has shown that participation in intercollegiate athletics is associated with a high level of satisfaction with the overall college experience, motivation to earn a college degree, and the development of interpersonal skills and leadership abilities (Ryan, 1989). The purpose of this study was to assess whether sports participation and sports type explained significant variance in college graduation GPA beyond prior academic achievement.

Discussion

In the first hierarchical regression analysis we examined the main and interacting effects of ACT composite score and athletic status in predicting the college graduating GPA. There was no interaction, but there was a significant main effect for ACT

composite (ACTC). Across all years the average R squared value for ACTC was 0.23, meaning ACTC explained approximately 24% of the variance in college graduating GPA. In contrast, athletic status (SPORT) added no significant variance beyond that explained by ACTC. These statistics were calculated for all students who graduated from Kansas State University between the years 1997-2003.

The fact that no statistical significance was found when athletic status was applied to the equation is consistent with what Shulman and Bowen found in their book *The Game of Life* (2001). The authors hypothesized their lack of statistical significance was due to the low number of comparable nonathletic peers to athletes when conducting their statistical analysis. In the case of this study, it is more related to the low number of athletes who graduate in a particular year. In any given data cohort we had approximately 3000-5000 non-athletic students who graduated, compared to anywhere from 50-98 student athletes who graduated. Shulman and Bowen (2001) stated in their book *The Game of Life*:

Performance gaps in the Division 1A public universities were not statistically significant, but this result has to be interpreted in the context of the relatively small numbers of athletes at these schools, and especially athletes in the High Profile sports, who had SAT scores that overlapped with those of their classmates. To be sure, the High Profile athletes, in particular, did not do at all well academically at these schools, but their performance was consistent with what they might have been expected to do. They came in with appreciably lower test scores than their classmates, and although their grades did not exceed what might

have been anticipated, they did not fall short either, relative to what could have been foreseen. (p. 66)

From this quote it is evident the authors believed student athletes were admitted with much lower test scores and high school GPA averages. The Division 1A public universities examined were: Miami, Penn State, University of Michigan, and University of North Carolina which are known to have higher general student entrance requirements than other public universities at the same level. They chose to focus on these schools for two reasons: all those institutions participate in an athletic culture and all are considered leaders within higher education (Shulman & Bowen, 2001). A third reason for focusing on these schools was the selective nature of each institution. This permitted the comparison of radically different kinds of athletic programs without leaving a world of shared academic expectations and requirements. Unfortunately, they found significant results at all levels of athletics except Division I public schools. We were hoping that lower entrance requirements at Kansas State University would allow us to make statistically significant findings relative to athletic status and academic performance because of the increased variance in achievement relative to the more academically elite schools in the Shulman and Bowen (2001) study.

Although Shulman and Bowen (2001) focused on many critical issues that face intercollegiate athletics today, the academic outcomes are the most relevant issue for this paper. The public is constantly bombarded with graduation rates of the high profile sports of basketball and football. In response to the constant outcry by the public for rates to improve, the NCAA began in the mid-1980's to track the graduation rates of athletes and students at large Division I institutions and to make the data public (Shulman

& Bowen, 2001). A graph in the book *The Game of Life*, reported the overall 1989 Division IA graduation rate was 34% for male athletes and 46% for female athletes for all athletes graduating within six years (Shulman & Bowen, 2001). Looking at NCAA reports filed by Kansas State University for the years examined in this study, we found that in 1993, male athletes had a graduation rate of 41% and female athletes had a rate of 71% , whereas the overall male student population at Kansas State had a 46% graduation rate and the general female student population had a 50% graduation rate. The rest of the cohort years can be examined in Table 7.

Table 7 *Comparison of the Graduation Percentage Rates of Athletes and Non Athletes in 1993-1997*

Year	Male Athletes	Female Athletes	General Male Students	General Female Students
1993	41%	71%	46%	50%
1994	41%	76%	52%	53%
1995	37%	79%	51%	53%
1996	45%	74%	49%	51%
1997	43%	68%	48%	49%

Overall the results of this study were consistent with those of Shulman and Bowen (2001). We did not find statistical significance for athletic status in predicting graduating GPA, beyond that already explained by ACTC. In this case, the results could have been affected by the low number of student athletes who graduated rather than a lack of comparable students with similar entrance data. Overall the graduation rates reported by Shulman and Bowen differed from those reported at Kansas State. Male athletes faired slightly better than the average Shulman and Bowen reported, whereas female athlete’s overall graduation rate was quite a bit above the average the previous authors reported (2001).

The second hierarchical analysis was conducted on athletes from all groups (1993, 1994, 1995, 1996, and 1997) for the purpose of testing the main and interacting effects of ACT composite score and type of sport. Sports were divided into high- and low-profile teams. High profile sports consisted of football and men's basketball; all others were considered low profile. The hierarchical regression analysis was conducted on GPA with the order of entry being the three main effects first: ACT composite (ACTC), type of sport (S); followed by the two-way interaction, ACTC x S,. There was only one statistically significant finding for the entire analysis. Significance was found for ACTC in the 1994 cohort. It is safe to assume from these results that sport type does not seem to have an effect on the graduating GPA of college athletes.

According to squad rosters obtained from Kansas State University, in the 1990's the average student athlete population was 417 athletes. Of this number, roughly 158 athletes would be classified as High Profile, with 135 of the remaining athletes in male Low Profile sports, and 124 in women's sports. These numbers would not hold true after the 1999 season, due to the addition of women's crew and the reduction of the number of men carried on each squad. For the analysis used in this study we looked at only the athletes who graduated, therefore reducing the number of available cases. Each of the five cohorts had anywhere from 58-98 athletes who graduated and could be used for analysis, which could explain why we didn't have any statistically significant findings. However, given that sample size does not strongly affect the magnitude of a correlation, another explanation is that type of sport makes no significant contribution in predicting graduating GPA.

The third analysis included only athletes from all years and investigated the three-way interaction of gender, ethnicity, and type of sport. The steps followed for this hierarchical regression analysis were similar to the previous equations and was conducted on GPA with the order of entry being the three main effects of gender (GD), ethnicity (ETH) and sport (SPORT) followed by two two-way interactions, GD x ETH, GD x SPORT, ETH x SPORT and a three-way interaction GD x ETH x SPORT. The results for this analysis yielded only a few statistically significant findings. Gender played a significant role in the 1994 and 1997 cohort in predicting college graduating GPA; the parameter estimates for these two years indicated women had a significantly higher GPA than men. Ethnicity had a significant effect in the 1993 cohort for predicting college graduating GPA, and the parameter estimate indicated Caucasian athletes had a significantly higher GPA than non-Caucasian athletes. There was no significance for any of the interactions in this hierarchical equation. The lack of statistical significance may have again been due to the low number of athletes who graduated in any given cohort. Alternatively, this provides triangulating evidence that type of sport is not an important predictor of graduating GPA.

The trend analysis that looked at the overall graduating GPA of the high profile and low profile athletes showed that the athletes classified in the low profile sports did not have a significantly lower GPA than those in the High Profile sports, except in 1996. The standard deviations for each group overlapped each other, so the difference was not significant. In fact it is interesting to point out that for every year except 1996, the minimum GPA for the Low Profile sports was lower than the minimum GPA for the

High Profile sports. So, clearly there were more differences within the profile groups than between them.

The results of this study have positive implications for those concerned about the academic progress of college student athletes. Athletes are graduating at a higher rate than nonathletes, demonstrating that participation on athletic teams does not affect college graduating GPA. Previous researchers have consistently reported that student athletes are not doing well academically (Lambertson, 1998; Lewis, 1997; Mixon, 1995; Pascarella, 1991; Pascarella, 1999; Shulman, 2001; Stuart, 1985; & Unruh, 2001). Future researchers may wish to examine the academic performance of student athletes who do not graduate. Unfortunately, most current university databases and athletic departments rarely keep information on students who leave their programs, so the data are nonexistent, making any analysis impossible.

Additionally Leah Hollis (1998) did research examining the support services offered at Division I institutions. During her investigation, Hollis found that academic preparedness was a key component that positively affects student athlete graduation rates. She concluded that the major obstacle in preventing higher graduation rates is the poor academic preparation of first-year student athletes. She postulated that in “order for institutions to meet the responsibility to reconstitute equal opportunity in education for student athletes, these institutions need to address the poor academic preparation of some student athletes (Hollis, 1998).”

Future research on this topic should address whether or not athletes are underprepared at the public Division 1A universities. Until conclusive evidence exists that these athletes are indeed under prepared, it will be difficult to examine the critical

question of why. I believe transfer students and the student athletes who don't graduate have much to add to this question, but the current tracking of such students doesn't exist. In most cases transfer students do not have to report high school GPA and ACT test scores, so it is difficult to examine the question of whether or not they are underprepared. In some cases student athletes begin their careers at the junior college level to help boost their academics in order to be eligible to play at a NCAA school. At other times, different reasons such as financial concerns or family are the reason a student athlete may attend a junior college, but without the incoming information to compare, it is difficult to assess whether transfer athletes struggle academically. Then there is the question of what happens to the student athletes who don't graduate. What reasons led to the athlete deciding to not complete school? It is difficult to assess these students as well, because once they no longer attend the institution and data cease to exist for them. Another important consideration is degree choice. Is there a difference in the majors student athletes are choosing? Their graduating GPA may not be statistically different than those of non athletes, but are the major's taken into account? This research must be taken to the next step in order to evaluate the effect chosen major has on graduating GPA. There also needs to be a more user friendly way to access the data. This would enable the researcher to get at the vast amounts of data that exist, but is unreadable by most statistical software programs. Kansas State University stores much of their data coded in letters, which tends to lock up and confuse statistical software. When the researcher attempts to re-code the letters to numbers, the software again encounters difficulties and has trouble with the re-coding. Difficulty with the data also prevented us from conducting

a chi square analysis on the missing data in the archival database to look at the demographics. This is an important limitation when interpreting the results of this study.

Future research must be done, so that colleges and universities can get back to the mission of education instead of being consumed by athletics and the potential gain financially and in recognition they may attain. As stated by the Knight Commission “...an obsession with winning and moneymaking that is pervading the noblest ideals of both sports and education in American, and its victims are not just athletes who found the promise of education a sham, but the colleges and universities that participate in an educational travesty – a farce that devalues every degree and denigrates the mission of higher education.” (Knight, 2001).

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