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## Academic Achievement of Intercollegiate Student-Athletes Compared to Nonathletes

James Reid Beal

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ACADEMIC ACHIEVEMENT OF INTERCOLLEGIATE  
STUDENT-ATHLETES COMPARED TO NONATHLETES

by

James Reid Beal

Bachelor of Business Administration, University of North Dakota, 1988

Master of Public Administration, University of North Dakota, 1990

A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

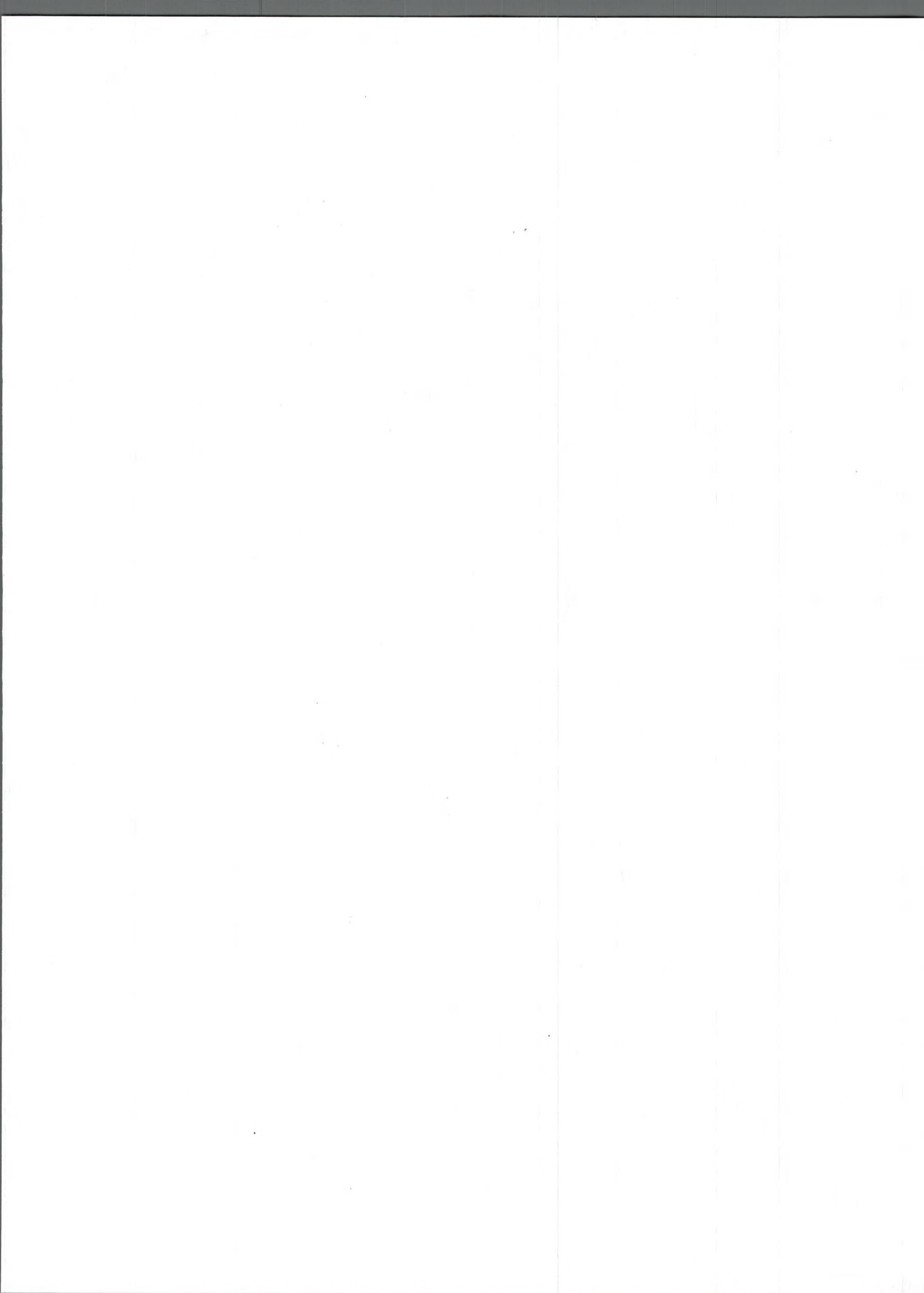
for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

December

1998



This dissertation, submitted by James Reid Beal in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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*and*

*Mom and Dad*

*—for all of your love and support*



## ABSTRACT

Intercollegiate athletics have been placed under intense scrutiny over the past decade. Concern has been expressed about the role and value intercollegiate athletics has in higher education. Recent scandals of intercollegiate programs and student-athletes involved in illicit or criminal activity, recruiting violations, and academic fraud or failures have increased the anxiety and skepticism. However, is the skepticism surrounding the academic integrity of intercollegiate athletics and academic achievement of student-athletes warranted? Are academics being compromised for the sake of athletics? Is the stereotypical "dumb jock" a myth or reality? Do athletes perform as well academically as nonathletes?

The purpose of this study was to compare the academic achievement of student-athletes to nonathletes at the University of North Dakota (UND), a NCAA Division II institution. Also, student-athletes competing in revenue sports were compared to those in non-revenue sports. All students listed as participating in a sport by the Office of Records and Admissions were included in the study. The student-athlete group was matched with a stratified random sample of nonathletes by gender, academic classification level, and academic college. Also, age was limited to a maximum of twenty-four years old. Cumulative college GPA was the primary measure of academic achievement. Other academic achievement factors included whether a student was placed on academic probation at some point in their college career, credit hours repeated, annual credit hours earned, and S-U courses taken.

ACT composite scores were used to compare academic preparation.

Overall, this study found that student-athletes' academic achievement surpassed nonathletes. Initially, no significant difference was found between the cumulative college GPAs of student-athletes and nonathletes. Furthermore, student-athletes were significantly less likely to have been placed on Academic Probation, repeated significantly less credit hours, and earned significantly more annual credits than their nonathlete counterparts. There also was no significant difference in the average number of S-U credits taken and the ACT composite scores of student-athletes and nonathletes. Finally, the cumulative college GPA of student-athletes participating in revenue sports was significantly lower than those participating in non-revenue sports. The "dumb jock" stereotype appears to be based more on myth and misconception than reality and fact.

## CHAPTER I

### INTRODUCTION

Intercollegiate athletics, athletes in particular, have been placed under intense scrutiny over the past decade. Concern has been expressed about the role and value intercollegiate athletics has in higher education. Recent scandals of athletes involved in illicit or criminal activity, payments to athletes, recruiting violations, and academic fraud have only increased the anxiety surrounding intercollegiate athletics. Furthermore, skepticism has been bolstered by perceived and actual examples of the lack of academic integrity and success. The overall concern has prompted many groups and agencies to call for reform of intercollegiate athletics. Among the most vocal for reform have been the public and business sectors, Congress, Knight Foundation, National Collegiate Athletic Association (NCAA), and university administrators and faculty.

While the call for reform has been more intense and garnered more publicity in recent times, it is not a new phenomenon. Today's criticisms about the time student-athletes must commit to sports, the professional nature of college sports, and expenditures on athletics compared to academics can be observed in the past as well. For example, the faculty at Harvard University in 1882 became involved in the supervision of football because of what they viewed as an excessive number of away games (Rudolph, 1990). In 1892, Harvard University's President Charles Eliot referring to the extravagant expenditures on athletics at



institutions such as Harvard University and Yale University, stated, "At these universities there must be constant economy and inadequacy in expenditures for intellectual objects; how repulsive, then, must be foolish and pernicious expenditures on sports" (Sheldon cited in Rudolph, 1990, p. 390). Furthermore, coaches salaries during that period were considered to be "out of proportion to those of professors" (Rudolph, 1990, p. 391-2). By the late 1800's, intercollegiate football inappropriately began to take on a professional nature in the minds of many. According to Frederick Rudolph (1990, p.374) "need for regulation was generally admitted, for the game intruded a spirit of athletic professionalism into an atmosphere where many believed that it did not belong."

In 1929, a Carnegie Foundation for the Advancement of Teaching report on college athletics declared, "recruiting had become corrupt, professionals had replaced amateurs, education was being neglected, and commercialism reigned" (Savage, H. J, Bentley, H.W., McGovern, J.T., and Smiley, D.F., cited in Knight Foundation Commission, 1993, p.III). Similarly, a 1974 outline by the American Council on Education (ACE) asserted intercollegiate athletics may not be congruent with the goals and values of higher education. Also, education and concern for the welfare of the student athlete seemed secondary to the protection of the institution (Hanford, 1974). The concerns raised in the past about intercollegiate athletics still persist in the present.

The most recent attempt to reform college athletics was lead by the Knight Foundation's Commission on Intercollegiate Athletics. In fact, the specific purpose of the Commission according to Knight Foundation President Creed Black (Knight Foundation Commission, 1993, p. I), was "to propose a reform agenda for college sports". The Knight

Foundation Commission, formed in 1989, was a 22-member committee primarily comprised of university presidents and chancellors, but also included a member of Congress, the Executive Director of the NCAA, and leaders from business.

The Knight Foundation Commission published three annual reports from 1991-1993. The first report, entitled "Keeping Faith with the Student-Athlete: A New Model for Intercollegiate Athletics," outlined the Commission's "one-plus-three" model of reform (Blum 1993; Knight Foundation Commission, 1993). The model called for presidential control to be focused on academic integrity, financial integrity, and certification (Knight Foundation Commission, 1993). However, the main focus was on academic integrity, with particular concern for the student-athlete. As the Knight Foundation Commission (1993) stated:

Even clearer, in the Commission's view, is the need to start with the student-athlete.

The reforms we deem essential start with respect for the dignity of the young men and women who compete and the conviction that they occupy a legitimate place as students on our campus. If we can get that right, everything else will fall into place.

If we cannot, the rest will be all wrong. (p.7)

The Commission would reiterate its concern, "the first consideration on a university must be academic integrity" (Knight Foundation Commission, 1993, p. 14). For the purposes of this paper, the Commission's views and recommendations regarding academic integrity will be examined in-depth.

Four general principles guided the Knight Foundation Commission in an effort to change the academic integrity of college sports (Knight Foundation Commission, 1993). First, academics would not be compromised for the sake of athletics. Student-athletes would



only be admitted if they were likely to graduate, in the judgement of an academic official. Furthermore, junior college transfers would not be given latitude in fulfilling eligibility requirements. Second, a "No Pass:No Play" philosophy should be used regarding admission, academic progress, and graduation rates of student-athletes. Third, athletes' eligibility should be based on their progress toward graduation within five years. Finally, student-athletes in each sport should have comparable graduation rates with other students who have spent a comparable amount of time as full-time students.

In their initial report, the Knight Foundation Commission made five specific recommendations in order to advance academic integrity. The first being that the NCAA should strengthen initial eligibility requirements. The result of this recommendation would be the passage of Proposition 16 by the NCAA, which went into full effect in August, 1996. Proposition 16 replaces Proposition 48, the controversial measure passed in the mid-80's setting minimum eligibility standards for freshman varsity athletes. The new measure puts more stringent eligibility requirements on freshman than did Proposition 48.

The second recommendation was that the letter of intent should serve the student as well as the athletic department. As it stands, student-athletes are required to attend a particular institution even if the head coach who recruited them leaves or the institution was put on probation for violations prior to their enrollment. The Commission felt this may be unfair to student-athletes and thus should be further reviewed.

The third recommendation was that scholarships should be offered for a five-year period. Aid to student-athletes should cover the length of time required to graduate, up to five years, as long as the athlete continued to participate in the sport and was in good

standing at the institution. However, athletic eligibility would continue to be limited to four years. In 1991, the NCAA mandate only required one year of aid to student-athletes.

The fourth recommendation was that athletic eligibility should depend on progress toward a degree. Student-athletes should be able to graduate within five years and demonstrate progress toward that goal each semester. In 1992, the NCAA adopted the requirement that Division I (See page 10) student-athletes must complete 25 percent, 50 percent, and 75 percent of the program course requirements for their specific degree in order to compete in their third, fourth, and fifth years of enrollment, respectively. Furthermore, Division I student-athletes must have a grade point average (GPA) of 90 and 95 percent of the minimum cumulative GPA required to graduate entering their third and fourth years of enrollment. In addition, Division I and II student-athletes must take 75 percent of their courses during the regular academic year, thus, not using summer school to make up credits (Knight Foundation Commission, 1993). Also, mid-year transfer students at Division I and II institutions must meet satisfactory progress requirements the following fall, not a year later (Knight Foundation Commission, 1993).

The final recommendation was that graduation rates of athletes should be a criterion for NCAA certification. The thinking of the Commission was to establish a peer review process for athletic programs similar to that of academic programs. According to the Knight Foundation Commission (1993, p.18), "Fundamental to the restoration of public trust is our belief that graduation rate in revenue-producing sports should be a major criterion on which NCAA certification depends." In 1994, the NCAA established a peer-review program (Blum, 1994). It has approved 54 of 70 cases it has reviewed for certification (Pickle, 1996).



While it would seem imperative that academic integrity continues to be the main focus of higher education, particularly regarding intercollegiate athletics, questions still remain unanswered. Is the skepticism surrounding the academic integrity of intercollegiate athletics and academic achievement of student-athletes warranted? Are academics indeed being compromised for the sake of athletics? Is the stereotypical "dumb jock" a myth or reality? Do athletes perform as well academically as nonathletes?

### Purpose of the Study

The purpose of this study was to compare the academic achievement of student-athletes with their nonathlete counterparts at the University of North Dakota (UND), a NCAA Division II institution. In order to make this comparison, cohorts of student-athletes and nonathletes were analyzed according to cumulative college GPA, ACT composite scores, annual credits earned, S-U course work, repeated course work, and if they have ever been placed on academic probation. Data was obtained through the UND Office of Admissions and Records for official university records and transcripts of all student-athletes and a stratified random sample of nonathletes for the 1995-96 academic year.

### Hypotheses

The study was designed to test the following null hypotheses:

- H<sub>o1</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes.
- H<sub>o2</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to gender.



- H<sub>03</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to academic classification level.
- H<sub>04</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to academic college.
- H<sub>05</sub> There is no significant difference between the ACT scores of student-athletes compared to nonathletes.
- H<sub>06</sub> There is no significant difference between the annual credits earned by student-athletes compared to nonathletes.
- H<sub>07</sub> There is no significant difference between the number of S-U courses taken by student-athletes compared to nonathletes.
- H<sub>08</sub> There is no significant difference between the number of repeated credit hours taken by student-athletes compared to nonathletes.
- H<sub>09</sub> There is no significant difference between the number of student-athletes on academic probation compared to nonathletes.
- H<sub>010</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes in revenue generating sports compared to student-athletes in non-revenue sports.

### Delimitations

For the purpose of this study, the student-athlete and nonathlete samples were limited to males and females, 24 years old or less, who were full-time undergraduates during the 1995-1996 Fall and/or Spring semesters at the University of North Dakota. While race is often considered in studies involving the academic achievement of student-athletes and

nonathletes, insufficient sample size of racial comparison groups at UND preclude a substantive review.

### Definitions

The following terms are defined as they were used in this study by the investigator.

**Academic Achievement:** A student's cumulative college grade point average as listed on his/her official transcript was the primary measure of their academic achievement. Data was also reported on ACT composite scores, annual credits earned, S-U courses taken, repeated course work taken, and academic probation status as listed on official transcripts.

**Academic Classification Level:** The total number of credit hours a student earned was used to determine classification level. The classification level were as follows:

Freshman: less than 24 credit hours

Junior: 61-89 credit hours

Sophomore: 24-60 credit hours

Senior: 90 or more credit hours

**Academic College:** The College within the University in which a student's major is listed was used to determine their academic College. In 1995-1996 UND had the following colleges:

Center for Aerospace Sciences

Graduate School

Center for Teaching & Learning

Human Resources & Development

College of Arts & Sciences

School of Engineering & Mines

College of Fines Arts & Communication

School of Law

College of Business & Public Administration

School of Medicine

College of Nursing

University College

Division of Continuing Education

For the purpose of this study, the Graduate School, and the School of Law were not included because these divisions of the University, with few exceptions, do not serve undergraduate



students. Also, the Division of Continuing Education was not included because it does not offer majors in its own right.

**Academic Probation:** A student's status, either in Good Academic Standing or Academic Probation, as indicated on the official transcript from the Office of Admissions and Records. Any student who has earned less than 90 total hours will be placed on Academic Probation at the end of the term in which he or she fails to meet the minimum GPA of C (2.0). Students with more than 90 credits need to meet the minimum GPA standard, in addition, they also need to meet the minimum standard of their respective University College program.

**ACT composite score:** A student's composite score on the American College Test, according to the official records of the Office of Admissions and Records.

**Annual Credits:** The average number of credits that a student earned during an academic year. Only credits earned during full-time enrollment in the Fall and/or Spring semesters at UND were included in the calculation. Credits earned via College Entrance Examination Board Advanced Placement Program, College-Level Examination Program (CLEP) Exams, Summer sessions, and at other institutions were excluded. If a student attended only one full-time semester, the total credits earned during that semester was doubled.

**Division I Institution:** It is the highest level of competition for intercollegiate athletics with approximately 305 institutions competing at this level. An institution that meets the criteria for membership in NCAA Division I which includes having at least 14 sports (seven sports for each gender) and granting athletic scholarships.

**Division II Institution:** An institution meeting the criteria for membership in NCAA Division II which includes having at least four men's and four women's sports along with

scholarships. The second of three levels of competition for intercollegiate athletics has approximately 246 institutions competing. It should be noted that NCAA legislation allows for Division II and Division III institution to petition to have one men's and one women's sport be considered Division I. This is the case with UND, where hockey is Division I.

**Full-time:** A student enrolled in at least twelve semester hours of credit during the 1995-1996 Fall and/or Spring semesters at UND was considered full-time.

**Grade Point Average (GPA):** Grade Point Average as listed on the official transcripts according to the Office of Admissions and Records. GPA is calculated by dividing the grade points earned by the number of credits completed. Classes for which letter grades of A, B, C, D, and F are recorded count toward grade points earned and GPA.

A: Marked Excellence - 4 grade points

D: Passing but low - 1 grade points

B: Superior - 3 grade points

F: Failure - 0 grade points

C: Average - 2 grade points

**Nonathlete:** A student enrolled full-time who did not participate in intercollegiate athletics was considered a nonathlete.

**Non-Revenue Sport:** Those sports which do not generate money for the athletic program because of their limited spectator appeal, general lack of media interest, and/or no opponent financial guarantee potential were considered non-revenue sports.

**Repeated Course Work:** A course in which a student has received a grade, usually D, F, or U and re-enrolls in that course in an attempt to improve their grade in that course. The last grade received is used in the calculation of a student's GPA.



**Revenue Sport:** Those sports which generate income for the athletic department because of their potential for high spectator paid attendance, i.e. gate receipts, potential for television broadcast money, and /or opponent guarantee money are considered revenue sports. For the purpose of this study, women's basketball, men's basketball, football, and hockey were considered revenue sports.

**Sport of Participation:** The intercollegiate sport(s) in which an athlete participated in during the season was considered their sport of participation

**Student-Athlete:** Any student who was listed as participating in a sport according to the Office of Admissions and Records.

**S-U Course Work:** A student of sophomore, junior, or senior level may elect to enroll in one or more courses per semester for S-U grading up to a maximum of 30 semester hours of credits. Grades of S-satisfactory and U-unsatisfactory replace traditional grades. A grade of S replaces grades A, B, and C and counts toward graduation, but does not count toward a student's GPA. A grade of U replaces grades D and F, does not count toward graduation or a student's GPA. For the purpose of this study, credits earned via College Entrance Examination Board Advanced Placement Program, CLEP Exams, administrative internships, practicums and student teaching were not included in the total of S-U credits because they are offered as S-U only.

### Overview

In Chapter I the problem, purpose, and research questions of the study were introduced. A review of the literature is presented in Chapter II, while the study methodology is presented in Chapter III. Specifically, the methods implemented in order to answer the research questions were addressed in this chapter. A discussion of the results can be found in Chapter IV and a summary of the findings, conclusion, and recommendations are presented in Chapter V.

## CHAPTER II

### LITERATURE REVIEW

#### Intercollegiate Athletics and Higher Education

The role and value of athletics in higher education has been debated for more than a century and in all likelihood will continue. However, two views toward college athletics were firmly established by the mid-1920s and are apparent today (Sage, 1990). One view holds that athletics are an integral part of student life and physical recreation (Sage, 1990). The second view is that intercollegiate athletics is an entertainment business and a training ground for professional and elite amateur athletes (Sage, 1990). Although these views are not necessarily mutually exclusive, they tend to be polarized positions taken by supporters and critics of athletics.

Supporters feel intercollegiate athletics are an integral part of the total college experience. Participating in and witnessing of athletics are important dimensions of collegiate life and contribute to the well being and personal development of students as well as alumni, both educationally and socially (Mihalich, 1982). Learning the importance of preparation to achieve a goal, working in collaboration with others while perfecting one's own skills, and learning about one's capacities and limits are examples of the type of development universities and colleges administrators hope to nurture. This is achieved primarily through academic programs, but can also be achieved and enhanced by other programs and activities such as



athletics (Mihalich, 1982). Schurr, Wittig, Ruble, and Henriksen (1993), found that the relative graduation rates for those involved in college sports either as a student-athlete or a fan were higher than other students after controlling for academic preparation for college, academic achievement in college and a variety of personal characteristics and college experiences. Furthermore, supporters feel intercollegiate athletics teach participants and observers about fitness, good sportsmanship, leadership, self-discipline, perseverance, and teamwork (Mihalich, 1982; Thelin & Wiseman, 1989). In addition, athletics can quickly and easily foster a sense of belonging to the college community.

Athletics also contribute to the progress and well-being of the institution itself. A well-rounded intercollegiate athletic program can generate an enormous amount of publicity and prestige in the name of the college or university which helps attract prospective students, retain current students, and maintain alumni allegiance to the school (Mihalich, 1982; Thelin & Wiseman, 1989). This publicity given to intercollegiate athletics was graphically illustrated when 22 million viewers watched the 1987 Fiesta Bowl between Pennsylvania State University and University of Miami (Funk, 1991). Additionally, McCormick and Tinsley (1987) examined the impact of big-time athletics on freshman Scholastic Aptitude Test (SAT) scores. They found schools participating in major college sports had a better undergraduate student body with the school's sports participation accounting for a 3% increase in SAT scores. They also found football winning percentage was positively and significantly associated with SAT scores.

Another benefit supporters claim is that other activities can be financed by the revenue generated from intercollegiate athletic events or money freed-up via gifts to the athletic



program (Grimes & Chressanthis, 1994; Lucey, 1982). Grimes and Chressanthis (1994) found that alumni contributions to academics were positively related to the overall winning percentage of the intercollegiate sports program at Mississippi State University. Brooker and Klastorin (1981) also found a significant positive relationship between athletic success and annual fund contributions but it was dependent upon the size and type of institution. James Frey, examining 12 studies over a 50-year period, found an association between athletic success and donations to the athletic program (Brownlee, 1990; Frey, 1985; Lederman, 1988). However, he did not find a relationship between winning percentage and academic donations.

Critics feel intercollegiate athletics are not congruent with the education mission of higher education. Specifically, they feel athletic excellence and academic excellence are not compatible (Gilley, 1986; Hochfield, 1987; Sperber, 1990ab). Examples of successful former student-athletes such as Congressmen Bill Bradley and Tom McMillan are seen as aberrations. Moreover, the overemphasis and commercialization of athletics, institutional indifference, and inattention by university and college presidents have created an imbalance between athletics and academics (Hanford, 1976; Sperber, 1990ab; Thelin & Wiseman, 1989). This imbalance has raised doubts about institutions commitment and ability to fulfill their primary mission of educating qualified people capable of successfully completing college and earning a degree (Thelin & Wiseman, 1989; Twardzisk, 1986). A survey of college presidents found that 86% believed the pressure for success on the playing fields interfered with the primary mission of education (Brownlee, 1990).

Another criticism is the competitive or "win at any cost" nature of intercollegiate athletics has lead to numerous academic abuses and scandals, but more importantly, a lowering of academic standards. Critics charge that colleges and universities admit academically unqualified athletes with little or no interest in academic endeavors under "special criteria or admit status" (Eitzen, 1990; Lucey, 1982; Hochfield, 1987; Sperber, 1990ab). A Chronicle of Higher Education survey revealed that nearly 18% of all athletes admitted in 1989 were characterized as "special admits" (Lederman, 1991b). This was about 4 times the amount for other students. Basketball and Football players at Division I-A were given "special authority admissions" 27% of the time or more than six times as often as other students (Lederman, 1991b). A survey of Division I-A and I-AA football coaches revealed that 25% felt the major reason that student-athletes do not graduate is that they don't belong in college because they are not capable of the doing the work (Cullen, Latessa, & Byrne, 1990). Critics believe these students enter higher education primarily for athletics and are not likely to graduate because they take easy courses and unexacting majors which are designed to keep them eligible rather than lead toward a degree (Hochfield, 1987; Eitzen, 1990; Sperber, 1990ab). Sperber (1990ab) referred to these courses and majors as the "hideaway curriculum" for student-athletes. Similarly, Case, Greer, and Brown (1987) would describe the phenomenon of a disproportionate percentage of athletes into selected majors when compared to the overall student body as "clustering".

Case et al. (1987) surveyed 75% of men's and 51% of women's Division I basketball teams for evidence of clustering. They found that 71% of the men's and 51% of women's teams exhibited clustering. Furthermore, 68% of the men's team and 75% of the women's



teams had significantly higher percentage of athletes in the clustered major when compared to other students. Case et al. also found that clustering was more pronounced in "big time" athletic programs (those finishing in the top 20 during the last three years). Clustering was even more prominent at elite academic institutions. At these institutions, academic isolation leads to clustering through the development of special majors, which the authors feel, may turn into academic dumping or placing students in non-productive majors. They also found that academic clustering was not limited to only one or two majors, although, it did not occur in the sciences.

Raney, Knapp, and Small (1983), examined student-athletes at UNLV and found that while students did not restrict the type of courses taken, there was significant concentration of coursework, particularly in physical education. More important, the physical education transfer credits played a critical role in keeping student-athletes eligible. Knapp and Raney (1987) replicated their previous study and found similar results regarding physical education courses. The Physical Education Department gave student-athletes grades that were on average 1.0 grade point higher than grades from other departments (Knapp & Raney, 1987). In a summary of their ten-year data collection, Knapp and Raney (1990), showed that Physical Education had a high level of earned credits, with English, Ethnic Studies, and Social Work gaining in concentration.

A study sponsored by the Center for Athletes' Rights and Education surveyed Division I, II, and III men's and women's basketball players attitudes and perceptions regarding their athletic and academic experiences (Leonard, 1986; Sack, 1987/1988). The study examined whether they felt being an athlete forced them to: take a less demanding

major; take "gut" or easy courses; hustle professors for grades, cheat in school work, and have others write papers (Leonard, 1986; Sack, 1987/1988). Thirty percent of Division I players felt they were forced to take a less demanding major and take gut or easy courses compared to 14% and 18% of Division II players (Sack, 1987/1988). One-fifth of Division I and 7% of Division II players felt they had to hustle professors for grades. As far as cheating is concerned, 13% of those in Division I felt forced to have others write papers and 12% felt forced to cheat in school work, this compared to 9% and 7% from Division II.

Further complicating the athletics versus academic struggle, is the time demands placed on student-athletes for practice, meetings, weight training and travel or whether it is even manageable and appropriate for full-time students (Atwell, 1991; Eitzen, 1990; Sperber, 1990ab). One study found football players spend up to 60 hours per week and basketball players 50 hours per week preparing for and participating in their respective sports (Edwards, 1986). The Center for Athletes' Rights and Education study found that 29% of student-athletes felt pressure to be an athlete first and student second (Sack, 1987/1988). The pressure was greatest for Division I scholarship athletes, where 45% felt that way. Over a third of the athletes felt coaches made demands on their time and energy which prevented them from being a top student (Sack, 1987/1988). Fifty-one percent of Division I and 41% of Division II players felt forced to take fewer courses a semester (Sack, 1987/1988). In addition, many players felt being an athlete forced them to cut classes (Division I-49%, Division II-35%), miss important exams (Division I-31%, Division II-14%), and miss taking courses they wanted (Division I-41%, Division II-28%). Another pressure to be an athlete



first and student second was evidenced by 24% of Division I and 19% of Division II players fearing that their financial aid would be withdrawn if they did not perform to the coach's expectations (Leonard, 1986). In fact, 21% of Division I athletes were threatened, either directly or indirectly, to have their financial aid removed if they did not accept the coach's philosophy (Leonard, 1986). These demands and pressures make it difficult for student-athletes to succeed as students. As Murray Sperber (1990a) stated, "we can't expect intercollegiate athletes to work full-time in ambitious athletic programs and also to be full-time students in a meaningful course of study (p. K10)."

Critics argue that the media attention given to athletic events and scandals surrounding athletics distort and devalue the public's image of higher education. The public now equates winning with a "successful" university (Twardzisk, 1986). Even schools with sound academic programs may be adversely affected by publicity and become perceived as a "jock factory" (Sperber, 1990a). Schools such as the University of North Carolina may be known more for its basketball program or Notre Dame for its football rather than their strong academics. Furthermore, the continuous abuses and scandals tarnish the integrity of all institutions of higher education, but more importantly erodes public trust (Thelin & Wiseman, 1989). In a statewide survey conducted by the Institute for Social Inquiry at the University of Connecticut, 50% of respondents believed that giving athletes undeserved passing grades and under-the-table payments were common in "big-time" programs (A Poll, 1996). Almost 60% felt athletics was overemphasized at larger schools.

Athletics cost an exorbitant amount of money charge critics, and few athletic departments make money on a consistent basis. Padilla and Boucher (1987/1988) examined

the total operating revenue and expenses of NCAA institutions in 1978, 1981, and 1985 and surmised that intercollegiate athletics did not pay for themselves at most colleges and universities. More recently, the National Association of College and University Business Officers found that most programs lost money (Lederman, 1993). In an era of fiscal constraints and inadequate funding, critics question institutional priorities in the allocation of scarce educational resources (Lucey, 1982; Funk, 1991; Lederman, 1993; Sperber, 1990ab; Thelin & Wiseman, 1989). Critics ask which is more important, a high caliber intercollegiate program or a diverse program of study? By covering athletic department deficits, critics feel academic programs, faculty and staff salaries, and the needs of regular students are being deprived at the expense of athletics.

Critics also argue that athletic departments have become increasingly isolated, both in practice and location, from academic departments. The athletic department is given special status at institutions, often acting as a separate business or semiautonomous "fiefdoms" (Funk, 1991; Childs, 1987; Sperber, 1990ab; Thelin & Wiseman, 1989). Further compounding the issue, is that coaches often earn more than the highest paid faculty member and often more than the university president (Myer, 1990; Cramer, 1986; Sperber, 1990ab). This has contributed to feelings of mistrust, suspicion, and resentment between faculty and athletic department personnel. Funk (1991) surmised faculty often behold athletics department members as "Philistines" who dehumanize the academic and intellectual environment while athletics department staff view faculty as lazy, overpaid hypocrites who put in few hours of actual work and are unrealistic. A study of faculty at NCAA Division I institutions found that only 29% of faculty believe coaches encouraged student-athletes to



achieve academically (Sherman, Webber, & Tegano, 1989). The study also found that 16% of the faculty believed academic records were altered to secure admission of athletes.

### Perceptions of Student-Athletes

Student-athletes must not only contend with enormous physical and psychological pressures from coaches and the athletic department. In addition, student-athletes, particularly black males, must deal with bias, prejudice, and stereotypes from students and faculty surrounding their character, interests, ambition, academic ability and academic integrity (Engstrom & Sedlacek, 1989; Mihalich, 1982; Sailes, 1993). Many students and faculty perceive student-athletes as academically inferior or as the stereotypical "dumb-jock". Furthermore, the negative or illegal actions of a small portion of athletes have led many to collectively perceive athletes as drug users and lawbreakers.

Lewis (1988) examined the academic interest and drug use among athletes and nonathletes at the University of Arizona. It was found that athletes were as interested in academic success as other students. Student-athletes did not experiment with drugs prior to college as often as other college students. Also, they used fewer mind-altering drugs and less often once in college.

Engstrom and Sedlacek (1989) found that students living in residence halls were more jealous, resentful, suspicious, and indignant toward student-athletes, compared to other students on their residence hall floor that had expensive sports cars. They were also more sad, disapproving, concerned, worried, and annoyed when a student-athlete was assigned as their lab partner. Residence hall students were more suspicious, disapproving, embarrassed, and disappointed when a student-athlete in the next room left school.

Engstrom and Sedlacek (1991) replicated their study using first-time entering freshman students. Freshmen were more suspicious, worried, and displeased when a student-athlete, as opposed to a student, obtained an A in class. In their new study, they again found students were more disappointed, concerned, worried and annoyed to have student-athletes as lab partners. Finally, students seemed less concerned, embarrassed, disapproving, and sad when student-athletes rather than students left school. In a study involving undergraduate and graduate students, Sailes (1993) found that 45% felt that student-athletes were not as smart as the average college student. In addition, 44% believed that student-athletes took easy courses to stay academically eligible. One quarter felt African American athletes were not academically prepared to attend college. Sherman et al. (1989) found that 65% of faculty believed that student-athletes were not as successful academically as other students. All of these perceptions and stereotypes were fortified by instances of academic neglect, failure, and fraud by athletes and athletic programs.

#### Intercollegiate Athletics and Academic Integrity

In 1997, 10 of 23 institutions on NCAA Probation had violated academic integrity to some degree (23 Institutions, 1997). Later that year, administrators at Texas Tech University announced that during the early 1990s at least 76 players were allowed to compete while academically ineligible (Selingo, 1997). Brownlee (1990) estimates that 10%-20% of Division I-A athletic programs are in trouble with the NCAA enforcement office at any given time. Most of these violations are related to improper benefits to or recruitment of athletes. It may be that these are easy to detect or are easier for institutions to admit compared to situations involving unethical academic abuses. However, there have been many academic



abuses repeated over time, ranging from certification of ineligible athletes to academic fraud to tampering with grades and receiving credit for courses never taken, to name a few.

Underwood (1980) reported 19 players on University of Southern California's Rose Bowl-bound team were enrolled, but not attending a speech course. The speech instructor resigned, but the athletes were allowed to get credit via a five-day "crash course". During that same period, the New Mexico basketball coaches and players were involved in two incidents. One involved the coach and assistant coach who arranged for a junior-college transfer to receive phony credits. The other involved five players receiving credit for an extension course, from Ottawa (Kansas) University, for which they never attended. It was later revealed that the University of Utah's star forward and four football players from the University of Oregon also received unearned credit for the Ottawa University extension course. Similarly, eight Arizona football players, three runners and basketball players at California State Polytechnic, and a football player from Purdue all received unearned credit for extension courses from Rocky Mountain College in Billings, Montana. Suspensions were given and games were forfeited. One would assume that coaches, athletic departments, and credit awarding institutions would learn from these experiences. However, fourteen years later the Southeastern College of the Assemblies of God Distance Learning Division would be at the center of allegations involving academic fraud for giving unearned credit (Naughton, 1996c). These abuses were revealed when assistant coaches at Baylor University submitted work to Southeastern on behalf of junior college athletes who were seeking to transfer to Baylor. It is estimated the fraud involved as many as 75 athletes from 30-40 institutions.

Those already included were Auburn, Georgia Southern, New Mexico State University, and the University of Texas-Pan American.

Another form of abuse involves the changing of, or attempts to change, a student-athlete's grade. In a highly publicized case, Jan Kemp the head of the English section of Developmental Studies at the University of Georgia, was awarded over \$2.5 million after she was fired when she complained about attempts by administrators to alter student-athletes grades (Monaghan, 1986; Nack, 1986). In 1997, a professor at Northeast Mississippi Community College filed two lawsuits claiming that she was pressured to change the grade of a basketball star and was later fired for making it public (Waller, 1997). While the abuses surrounding intercollegiate athletics seem to repeat themselves, attempts at reform often follow.

### Control and Reform of Intercollegiate Athletics

Questions and concerns regarding the unethical practices in intercollegiate athletics and the often alleged incongruence of athletics with higher education have been repeated many times over the last century. This has lead to numerous attempts by faculty, administrators, and governing bodies to control and reform college athletics. However, these attempts did not begin with the advent of intercollegiate athletics. Intercollegiate athletics have existed in the United States for almost a century-and-a-half. The first sporting event in which students from different universities competed was a boat race, in 1852, involving students from Harvard University and Yale University. Baseball would be the next intercollegiate sport with Amherst and Williams Colleges forming a game in 1859. Football



would be introduced in 1869 at a game between Princeton and Rutgers, followed shortly by track, 1873, and swimming 1877 (Bale, 1991).

Intercollegiate athletics during this period were student-sponsored with little, if any, input and control from faculty, administration, or alumni. Events were initiated, played, and governed by the students. The first intercollegiate governing body was the student-formed College Union Regatta formed in part to settle questions about the eligibility of a coxswain from Harvard University's rowing team in 1855 (Hardy & Berryman, 1982; Sage, 1990). The various student governing associations that developed had three main purposes: (1) sponsor and conduct competition; (2) outline playing rules; and (3) determine eligibility criteria (Hardy & Berryman, 1982; Sage, 1990).

The faculty and institutional control started to occur in the last two decades of the 19th century. This was a period marked by the rapid expansion of intercollegiate athletics with Princeton establishing the first college faculty athletic committee in 1881 (Sage, 1990). Faculty and administrators felt athletics had become too big for students to manage while alumni felt athletics had become too big for institutions to ignore. Faculty and administrators expressed concerns, which would be repeated many times in the years to come. Specifically, students were pursuing goals not congruent with higher education; there was concern over "growing professionalism, mismanagement of finances, lack of sportsmanship, and glorification of athletics over academics and other problems" (Sage, 1990, p. 172). However, alumni saw potential in the gate receipts and championships (Hardy & Berryman, 1982; Sage, 1990). The effectiveness of these early faculty committees varied, although they did establish

a trend of placing athletics under institutional control with power sometimes shared with students or alumni (Newman & Miller, 1994; Sage, 1990).

The variations in institutional control and rapid expansion of athletics made it evident that interinstitutional governing agencies were necessary to supervise and regulate intercollegiate athletics. The first meeting between faculty representatives from different colleges to discuss athletics occurred in New York in 1883 (Hardy & Berryman, 1982; Sage, 1990). The group proposed regulations which would limit all games to college grounds, prohibit professional coaches, and limit all athletes to four years of competition (Hardy & Berryman, 1982). There was little campus support because these proposals were viewed as too much of an impingement on student affairs (Hardy & Berryman, 1982). Faculty support would become stronger in the 1890s as athletics and the corresponding abuses continued to grow (Hardy & Berryman, 1982)

Faculty-run athletic associations soon began to form. Interinstitutional agencies or conferences were formed by colleges "in one geographic area and usually with similar enrollments, academic requirements, and financial standings (Sage, 1990, p. 172)." Conferences such as the Big Ten Conference, formerly the Intercollegiate Conference of Faculty Representatives, and the Ivy League were formed during the turn of the century (Hardy & Berryman, 1982; Sage, 1990). The purposes of the conferences were to set standards, make rules and regulations concerning athletic eligibility, enforce conference rules, and draw playing schedules. Philosophical differences of various institution leaders hindered attempts at these tasks although these early interinstitutional efforts established the precedence of giving faculty governing committees a role in the establishment of eligibility



standards, maintaining academic integrity, and amateurism (Newman & Miller, 1994; Sage, 1990).

A collective national interinstitutional governance body would not develop until 1905 when the American public called for a reform of football after there were 18 deaths and 149 serious injuries during the season (Hardy & Berryman, 1982; Newman & Miller, 1994; Rudolph, 1990; Sage, 1990). The public outcry led to a threat from President Theodore Roosevelt to abolish college football, by executive order, unless rules to make the game more fair were made (Rudolph, 1990; Sage 1990). Colleges united to develop solutions and modify rules, resulting in the formation of the Intercollegiate Athletic Association of the United States in 1906. Four years later it changed its name to the National Collegiate Athletics Association (NCAA) (Hardy & Berryman, 1982; Sage, 1990). From its onset, the NCAA stood for institutional control, particularly by the faculty, and educational principles (Hardy & Berryman, 1982; Sage, 1990).

Athletic reformers of the early 20th century believed that giving the athletic department academic status and athletic directors and coaches faculty rank would make competition "more educational" (Hardy & Berryman, 1982, p. 23). The success of this type of faculty control was limited because many of the committee chairs received their position because of their ability as football coaches, not as faculty members. There was an inherent conflict of interest created because of the pressure put on athletic directors and coaches to win and to earn a profit. More importantly, merely giving coaches and athletic directors faculty status "did not reorient athletic departments toward educational principles" (Hardy & Berryman, 1982, p. 23).

Throughout this period, women's athletics was much more successful at using faculty to promote educational principles and avoiding the problems of the commercialized men's programs. From the beginning, women faculty members advised and directed women's sports. However, this success came at the expense of high skill level competition (Sage, 1990).

Although new conferences and a national governing body were established, there continued to be great anxiety and consternation surrounding college athletics. The Carnegie Foundation for the Advancement of Teaching brought many of the concerns to light when its 1929 report entitled, *American College Athletics*, declared, "recruiting had become corrupt, professionals had replaced amateurs, education was being neglected, and commercialism reigned (Savage et al., cited in the Knight Foundation Commission, 1993, p.III)". The report commonly referred to as 'Bulletin Number Twenty-three' went on to state that college and university presidents were responsible for correcting the problems in intercollegiate athletics and thus, defending intellectual integrity (Prichett, 1929).

While the Carnegie report garnered much support for the reform of college athletics, its impact was neutralized by the organizational culture of American campuses and the growing popular appeal of college sports (Thelin, 1994). Another major reform movement would occur in the 1950s after a "point shaving" scandal involving organized crime and college basketball was uncovered in 1951 (Thelin, 1994). This prompted the American Council on Education (ACE) to appoint a Special Committee on Athletic Policy, consisting of ten universities presidents, to conduct an inquiry into college sports. This report was known more for two minor aspects of a recommendation, abolishing spring football practice



and postseason bowl games, than the overall message which consisted of ten recommendations (Hannah, 1952). The report noted serious violations of educational policies and moral conduct were not uncommon. It stated that control of athletic policy had slipped from the hands of faculty and central administration. The report made recommendations aimed at relieving external pressures by ensuring institutional control, suggesting general standards of acceptable practice, and invoking measures of enforcement (Hannah, 1952). It also recommended college and university presidents involvement to correct the perceived problems (Hannah, 1952). Once again, little action was taken as the athletic governing bodies ignored the recommendations (Hanford, 1979; Hardy & Berryman, 1982).

During the 1960s intercollegiate athletics and higher education, in general, enjoyed a period of prosperity and limited critical inquiry. This ended in the early 1970s when student unrest and a sagging economy placed colleges and universities under intense scrutiny and would led many to question the high priority they were given in government budgets (Thelin, 1994). College athletics was once again scrutinized as athletic departments increasingly competed for the education dollar.

Hanford (1974), in a ACE report entitled, *An Inquiry into the Need for and Feasibility of a National Study of Intercollegiate Athletics*, concluded that intercollegiate athletics faced severe financial problems with uncontrollable operating costs to stay competitive. Furthermore, the increase in demand by professional sports for college trained athletes, increased media exposure, and pressure placed upon coaches to win resulted in increased expectations and demands placed upon college athletes. This has also led to many unethical practices and the exploitation of student-athletes, particularly minorities. More

importantly, intercollegiate athletics may not be congruent with the goals and values of higher education. Also, education and concern for the welfare of the student athlete seemed secondary to the protection of the institution. Hanford (1974) warned that national solutions will be difficult because of regional differences. He also stated that faculty and faculty committees had little involvement or influence in the governance of intercollegiate athletics. Hanford (1974, 1976) expressed concern over the lack of debate and inattention by presidents, faculty, and scholars toward the policy issues surrounding college athletics. Hanford recommended that colleges and universities evaluate their intercollegiate programs as part of their accreditation self-studies.

The 1980s saw many articles and books written on scandals surrounding intercollegiate athletics. The drug-induced death of University of Maryland star Len Bias; gang-rape, shootings, and selling of drugs by football players at University of Oklahoma; point-shaving at Tulane University; payments to athletes at Southern Methodist University and University of Minnesota; and the lack of educational progress and control at North Carolina State University are among the more sensational scandals, but certainly not the only ones. (Axthelm, Foote, Coppola, & Kirsch, 1980; Cramer, 1986; Gup, 1989; Howe, 1987; Nikou & Dinardo; 1985; Underwood, 1980). There was little action taken until October 1989, when the Knight Foundation's Commission on Intercollegiate Athletics was formed. It represents the most recent attempt to reform college athletics. In fact, the specific purpose of the Commission, according to Knight Foundation President Creed Black (Knight Foundation Commission, 1993, p. I) was "to propose a reform agenda for college sports". The Knight Foundation Commission was a 22-member committee primarily comprised of



university presidents and chancellors, but also contained a member of Congress, the Executive Director of the NCAA, and leaders from business.

The Commission published three annual reports from 1991 to 1993. The first report, entitled "Keeping Faith with the Student-Athlete: A New Model for Intercollegiate Athletics", outlined the Commission's "one-plus-three" model of reform (Blum, 1993; and Knight Foundation Commission, 1993). The model called for presidential control to be focused on three areas: academic integrity, financial integrity, and certification (Knight Foundation Commission, 1993). However the main focus was on academic integrity, with particular concern for the student-athlete. As the Knight Foundation Commission (1993) stated:

Even clearer, in the Commission's view, is the need to start with the student-athlete.

The reforms we deem essential start with respect for the dignity of the young men and women who compete and the conviction that they occupy a legitimate place as students on our campus. If we can get that right, everything else will fall into place.

If we cannot, the rest will be all wrong (p.7).

The Commission would reiterate its concern that "the first consideration on a university must be academic integrity (Knight Foundation Commission, 1993, p. 14)."

The NCAA has instituted its own attempts at instilling and maintaining academic integrity. Proposition 48 and Proposition 16 were controversial mandates which set minimum high school GPA and college entrance exam levels for high school students in order to be eligible to compete in intercollegiate athletics as freshmen. However, the question remained: Are student-athletes academically inferior to their nonathlete counterparts or has the skepticism been bolstered by perceived and actual examples of the lack of academic integrity

and success? To gain a better understanding of the academic achievement of student-athletes, one needs to examine studies that compare their achievement to that of nonathletes.

### Student-Athletes and Academic Achievement

There are generally three aspects discussed when examining the academic achievement of intercollegiate student-athletes compared to nonathletes. First, is how well students are prepared for the academic rigors of college. To answer this, studies that examined high school cumulative GPA and college entrance exam scores, either ACT or SAT, were reviewed. While it can be argued whether or not high school GPA and college entrance exams are valid predictors of college academic achievement, it is beyond the scope of this paper. Suffice to say, there are those who have considered and found entrance exams not to be good predictors (Blum, 1995a; Haworth, 1997; Sellers, 1992; Walter, Smith, Hoey, Wilhelm, & Miller, 1987; Witham, 1995), particularly for minority students and those with low socio-economic background. At the same time, there are also many who considered and have found support for their use as predictors (Blum, 1992; Ervin, Saunders, Gills, & Hoglebe, 1985; Hicks, 1991; Kiger & Lorentzen, 1986; Maloney & McCormick, 1993; McArdle & Hamagami, 1994; Sheffield, 1989). Second are studies that discuss how well students perform once they are enrolled in college, usually measured by cumulative college GPA. Finally, studies which examine the graduation rates of student-athletes were reviewed. **Note:** The following sections present many studies that discuss differences in the academic achievement of student-athletes and nonathletes of which the term significant implies a statistically significant difference. If not stated as significant, the recognized difference is purely descriptive with no statistical test(s) having been performed.



### College Academic Preparation

It is quite apparent that student-athletes are not as well prepared for college as their nonathlete counterparts. In virtually every study examining college preparation, student-athletes had a lower high school GPA and lower college entrance exam scores. Male athletes tended to be less prepared than female athletes. Black athletes were less prepared than white athletes. Athletes competing in revenue sports, basketball and football, were less prepared than those competing in non-revenue sports. The ensuing studies provide the evidence.

Larsen (1973), compared male student-athletes at University of Tennessee-Knoxville for 1965 to 1973 to the total population of males. The ACT composite score of male athletes was slightly less, 21.1 compared to 22.8, than that of all males entering as freshman from 1968 through 1972.

Purdy, Eitzen, & Hufnagel (1981, 1982) compared athletes and the general student body attending Colorado State University from 1970 to 1979. Athletes were less prepared for college than nonathletes. Student-athletes had lower high school GPA (2.99 to 3.31), lower average class rank (69% to 71%), and lower SAT/ACT scores (SAT:949 to 997; ACT:20.8 to 22.1).

Purdy et al. found significant differences existed among athletes according to gender and race. Female athletes had significantly higher high school GPA, high class rank, and SAT scores than male athletes. Black athletes had significantly lower high school GPA, high school class rank, and SAT/ACT scores. They also found athletes in revenue sport accounted for 47% of SAT scores under 700 by athletes. A similar percentage of athletes in revenue sports accounted for low ACT scores. Athletes in revenue sports accounted for 36% of



athletes admitted with high school GPA under 2.5. The lack of college preparation among athletes in revenue sports was also reflected in their average scores. Basketball players had an average SAT score of 893, an average ACT score of 19.3, and high school GPA of 2.89. Football players had an average SAT score of 899, an average ACT score of 19.3, and a high school GPA of 2.6.

Stuart (1985) compared all freshman football players receiving scholarships between 1977 and 1980 at Iowa State University to a randomly matched sample of nonathletes. Student-athletes had a significantly lower mean high school GPA (2.71 to 3.01) and ACT composite score (18.7 to 20.8). The mathematics SAT score was lower for athletes than nonathletes. This may be explained by a significantly lower average number of high school mathematics courses taken by athletes compared to other students. However, student-athletes had a significantly higher mean high school rank, 40.5 to 34.3.

Eitzen and Purdy (1986) used the same data collected at Colorado State University from 1970 to 1979 in their previous study (Purdy, Eitzen, & Hufnagel; 1981, 1982) to examine the difference between black and white male athletes. They found white male athletes were better prepared for college than black male athletes. Their scores were significantly higher in the SAT (960 to 757), high school GPA (2.91 to 2.41), and class standing (65 to 58). White athletes also had a higher, although not significant (using  $P < .01$ ), ACT composite score (21.4 to 15.3) compared to black athletes.

Eitzen and Purdy also examined the difference between full-scholarship, partial scholarship and non-scholarship athletes within each race. The results revealed that full-scholarship athletes were the least prepared for college, regardless of race. They had the

lowest SAT scores, ACT composite scores, and high school GPA among the three scholarship groups. White athletes were better prepared than black athletes regardless of scholarship level. Those athletes in revenue sports were less prepared for college than other athletes, regardless of race. Their SAT scores, ACT composite scores, and high school GPA were usually the lowest among sport and race.

Stanton (1988) compared athletes and nonathletes at the University of Southern Mississippi enrolled in 1986-87. Nonathletes were better prepared than athletes with an ACT composite score of 18.6 compared to 17.4 for athletes, with men's and women's basketball having the lowest average scores of 15.2 and 15.7.

Sheffield (1989) examined predictor variables for entering freshman at Pennsylvania State University during 1985 and 1986. Athletes were significantly less prepared with lower mean SAT scores and lower mean high school GPA. The average SAT score for athletes was 995 compared to 1087 for nonathletes. Athletes also had a lower high school GPA compared to nonathletes 2.98 to 3.33.

Mulder (1990) compared students in freshman classes of 1979-85 at Northwestern, a small Midwest college. Athletes had slightly lower, 21.6 to 22.4, ACT scores than nonathletes.

Sellers (1992) gathered data from men basketball and football players at 42 NCAA Division I institutions. He found white student-athletes had a higher high school GPA average than black student athletes, 3.70 to 4.9 (8-point scale, with A=1). White student-athletes had significantly higher SAT scores than black athletes, 904.2 to 750.4.



Maloney and McCormick (1993) gathered data on all students enrolled at Clemson University during 1985-88. Athletes scored on average 150 points less on the SAT than nonathletes and high school rank was about 19% lower.

Naughton (1997) compared the average high school GPA and college entrance exams of football and basketball players on teams that finished in the top 25 during the 1996-97 to freshmen who entered in September 1996. A four class, 1993-1996, average was used for athletic teams in order to make the numbers similar. An overall direct comparison of SAT/ACT scores was difficult since averages were given for all athletes and some freshman classes, while others reported the range for the middle 50% of the freshman class.

Naughton (1997) found football players averaged a 2.79 GPA compared to 3.38 for freshman class. Football players averaged a 925 SAT and 19 ACT. The SAT lowest ranges for the middle 50% reported for the freshman class at the top 25 football schools were 970-1220 at Syracuse University and 970-1200 at Arizona State University. Football players at these schools averaged an SAT score of 957 and 947, which would fall in the lowest 25% percentile at their respective institutions. Similar disparities could be seen in the average ACT of football players and the middle 50% of students. The lowest range at any university was 20-26 at Arizona State University, University of Nebraska, Louisiana State University, and Kansas State University while the player averages at these schools were 19, 20, 19, and 20 respectively.

A comparison of basketball players on the top 25 teams to entering freshman was not much better. Basketball players had a high school GPA of 2.80 compared to 3.35 for the freshman class. The average SAT and Act were 917 and 19 for basketball players. The



lowest SAT range for the middle 50% was 940-1190 at the University of New Mexico were athletes average a 953. The lowest ACT range was 20-24 at University of New Mexico were athletes averaged a 19.

Even at institutions known for their academic and athletics balance, the athletes were markedly lower than entering freshman. At the University of North Carolina, the average SAT scores for football and basketball players were 953 and 905 compared to 1220 for freshman. The average ACT for football players was 20 compared to 28 for the freshman. The high school GPAs were 2.64 and 2.73, however, data did not exist for freshman. The University of Michigan showed similar deviations between athletes and non athletes. The high school GPA for football and basketball players was 2.85 and 2.88 compared to 3.63 for entering freshman. The average SAT scores were 920 for football and 965 for basketball players, compared to middle 50% range of 1180-1410. Average ACT scores showed the same low achievement of athletes, with athletes averaging 19 compared to a middle range of 25-30 for entering freshman. In only four institutions were the average SAT/ACT scores for athletes above the lowest middle 50% range mark. In sum, this means that the athletes average college entrance exam score was in the lowest 25% percentile and in most instances markedly so.

#### College Academic Achievement

The literature reviewed on college academic achievement of student-athletes is inconclusive. Approximately half the studies reviewed showed student-athletes have lower, sometimes significantly lower, academic achievement than nonathletes, at the same time, the other half showed no difference or student-athletes having higher academic achievement.

Thus, each study should be taken on its own merit. Several findings with student-athlete groups were consistent. White athletes appeared to do significantly better than black athletes. This may be explained by difference in college preparation of white and black athletes. Female athletes achieve better than male athletes. Those athletes in revenue sports did not perform as well as those in non-revenue athletes.

Davis and Cooper (1934) examined 41 studies conducted at over two hundred institutions including Harvard University, University of Michigan, Penn State University, and Columbia College. In sum, they found no major difference between nonathletes and athletes regarding academic achievement.

Larsen (1973) found that male student-athletes had slightly lower overall mean GPA than male undergraduates, 2.38 compared to 2.58. Within the eight colleges, student-athletes had lower GPA than nonathletes except for Agriculture. Basketball had the lowest mean GPA, 2.16, and football had the third lowest, 2.26, when comparing sports.

Purdy et al. (1981, 1982) found that athletes did not perform as well as nonathletes once in college. Student-athletes cumulative college GPA was 2.56 compared to 2.74 for nonathlete. However, when separating by gender and athletic participation, female athletes had the highest GPA at 2.88 for any group. This was significantly higher than male athletes, 2.4. Black athletes performed significantly lower than white athletes, 2.11 to 2.61. Athletes in revenue sports accounted for 50% of athletes with a cumulative college GPA below 2.00, even though they accounted for only 33% of the total athletes. Football players had the worst college GPA, 2.30, followed by basketball players, 2.49.



MacKenzie (1981) examined academic achievement of male athletes at the University of California-Davis from 1970-1979. Among the students regularly admitted from high school, after two years of college, athletes had a comparable, but slightly lower GPA than nonathletes, 2.75 to 2.89. The percentage of regular admission students with a cumulative GPA of 2.0 or better was similar between athletes and nonathletes, 93% and 95% respectively. Among students who were classified as special admit, after two years of college, athletes and nonathletes had very similar GPAs, 2.34 to 2.33. Furthermore, 82% of these student-athletes had a cumulative GPA of 2.0 or better compared to only 76% for special admit nonathletes.

Stuart (1985) found after two years of college there was no significant differences in mean college GPA. Student-athletes had a cumulative college GPA of 2.13, compared to 2.15 for nonathletes. In addition, there was no significant difference between student-athletes and nonathletes in the number of mean semester credit hours taken, 47.2 to 45.29; courses dropped, 1.81 to 1.48; and courses repeated, 0.95 to 0.67. Stuart also found no significant difference in the number of major changes made by athletes and nonathletes during their first two years of college. However, student-athletes were more likely to change to the College of Education.

Eitzen and Purdy (1986) found that white male athletes had a significantly higher college GPA (2.51 to 2.06) than their black peers. They also examined the difference between full-scholarship, partial scholarship and non-scholarship athletes within each race. Among white athletes, non-scholarship and partial scholarship preformed better than full scholarship athletes (2.59 to 2.35). The results among black athletes were mixed. Partial scholarship



athletes had the highest college GPA (2.36), followed by full scholarship athletes (2.02) and non-scholarship athletes (2.01). When comparing sports within each race, revenue sports had the lowest GPAs. Among black athletes, football players had the worst GPA (2.02) followed by basketball players (2.07). These sports also had the lowest GPA among white athletes, 2.34 for football and 2.50 for basketball.

Marcotte (1986) analyzed the academic success of Cincinnati Technical College basketball. Fifty-one players were matched to 51 non-players who had similar dates of entry, Differential Aptitude Test scores, and programs of study. Basketball players had a significantly lower mean GPA than non-players (1.98 to 2.29). Players, on average, earned less credit hours (54.3 to 57.6) than non-players. Fifty-nine percent of players took at least one developmental course compared to 49% of non-players. Basketball players also had a slightly higher average number of developmental courses than other students, 2.06 to 1.52.

Wood (1987) compared freshman males entering Livingston University, a small Division II institution, from 1976-1980. There was no significant difference between the college GPA of athletes and nonathletes at time of termination. For student-athletes the GPA was .986, and for nonathletes it was .939. Wood also found there was no significant difference between the percentage of student-athletes and nonathletes admitted conditionally, 43.1% to 51.5%.

Lewis and Marcopulos (1989) compared student-athletes who competed at San Joaquin Delta College from 1983-1988. Student-athletes and students who attempted 12 units for two consecutive terms from fall 1986 to summer 1987 were compared. The GPA for student-athletes was from 2.54 to 2.61 compared to 2.35 to 2.44 for nonathletes. No

attempts were made to determine if any significant differences existed. They also found that student-athletes had similar initial reading levels as nonathletes.

Stanton (1988) found athletes had a significantly higher mean GPA (2.20) than nonathletes (2.05) when ACT composite scores were used as a controlling variable. They also performed significantly higher according to gender, race, and academic classification level. Male athletes, white athletes, freshman and sophomore athletes performed significantly higher than nonathlete. Female athletes, black athletes, junior and senior athletes did not perform significantly different than higher than nonathletes. Descriptive data showed student-athletes and nonathletes attempting similar course loads and taking a similar number of pass/fail courses.

Sheffield (1989) found no significant difference in freshman GPA of student-athletes and nonathletes, 2.5 to 2.45. Female athletes had a slightly higher, albeit nonsignificant, freshman GPA than their nonathlete counterparts, 2.58 to 2.46. Male athletes and nonathletes had virtually identical freshman GPA, 2.45 to 2.44. Both white and black student athletes had slightly higher, nonsignificant, freshman GPA compared to their racial counterparts. However, athletes took significantly more remedial coursework than nonathletes. Athletes on scholarship and male athletes were more likely to take less difficult courses, by course level, than nonathletes.

Mulder (1990) found athletes had a slightly lower college GPA than nonathletes. Athletes had a mean GPA of 2.38 compared to 2.68 for nonathletes. Hicks (1991) collected data from the College of St. Francis entering freshman during 1986 to 1989. He found that high school GPA and ACT composite scores accounted for most of the variance



in cumulative college GPA. While participation in sports was not found to be an effective predictor, nonathletes had a higher mean college GPA (2.74) than athletes (2.52).

Moode (1991) included all first-time freshman and transfer students enrolled at a large southwestern Division II university from 1987-1989. There was no significant difference between the college GPA averages of athletes and nonathletes (2.3 to 2.38). However, male student-athletes had a significantly lower GPA than the overall student body, 2.24 to 2.38. Female athletes had a higher GPA than the overall student body 2.48 to 2.38. No significant difference was found between athletes in major sports and minor sports. Black athletes had significantly lower GPA than other athletes. Water polo athletes had significantly lower GPAs than athletes in other sports.

Sellers (1992) found that white student-athletes had a significantly higher college GPA than black student-athletes, 2.46 to 2.12. He found no significant difference in the mean number of years in college by race.

Maloney and McCormick (1993) found athletes as a whole had a significant lower college GPA than the overall student body, 2.37 to 2.68. Looking at sports specifically, all sports were lower with the exceptions of women's track and tennis, which had similar GPAs, and women's swimming and volleyball, which actually had a higher GPA. Those with the lowest GPA were the traditional revenue sports of football (2.12) and men's Basketball (1.93).

Maloney and McCormick (1993) also found that everything else being equal by controlling for background, participation in college sports reduces academic success only slightly (GPA). They found that athletes in non-revenue sports have nearly identical GPAs

compared to nonathletes with similar backgrounds. However, athletes in revenue sports did not perform as well as their peers. Furthermore, they found that higher SAT scores, higher class rank, and higher high school GPA lead to higher college GPA.

#### Academic Persistence and Graduation Rates of Student-Athletes

The studies and literature reviewed show that student-athletes graduate at a rate similar to nonathletes. It does appear that male student-athletes in revenue sports, particularly black basketball players, graduate at a lower rate than other student-athletes and students. Overall, there are studies that show student-athletes graduate at a lower rate, while others show athletes graduating at a higher rate or at a similar rate. University and colleges are now required under the Student Right-to-Know and Campus Security Act to publish the graduation rate of students and student-athletes by sport and race (Mallette, 1992). Caution should be taken when comparing graduation from institution to institution or even within a single institution (Naughton, 1996b and Lederman, 1991a). There are several ways to calculate graduation rate based on who is considered a student-athlete, whether transfer students are included, and what constitutes full-time (Mallette, 1992).

Larsen (1973) examining the first-time freshman class of 1965 found that 48% of male student-athletes graduated after four years compared to 51% of nonathlete males. The freshman class of 1968 showed that only 28% of student-athletes graduated compared to 40% of nonathletes. However, more athletes were still enrolled than nonathletes, 16 to 9. Larsen surmised that four years may not be a good indicator of graduation rate.

Purdy et al. (1981, 1982) found athletes graduated at a lower rate than other students, 34.2 to 46.8. However, female athletes had a significantly higher graduation rate than male



athletes, 41% to 33%. Black athletes were significantly less likely to graduate than their white counterparts, 21% to 35%. Football players had the lowest graduation rate of athletes by sport at 26.8%.

MacKenzie (1981) found that among regular admit students entering University of California-Davis from 1968-73, 79% of student-athletes graduated within six years compared to 68% of male students as a whole. Among special admit students, 57% of athletes graduated within six years, compared to only 38% of nonathletes.

Stuart (1985) found there was no significant difference in the enrollment status and academic status of student athletes and nonathletes. Eight-one percent of student-athletes compared to 70% of nonathletes continued to be enrolled after two years. Of the athletes who did not continue enrollment, 12 withdrew and 6 were dismissed, compared to 14 withdrawn and 13 dismissed from nonathletes.

Eitzen and Purdy (1986) found white male athletes were much more likely to graduate (35% to 21%) than their black counterparts. They also examined the difference between full-scholarship, partial scholarship and non-scholarship athletes within each race. Among white athletes, those receiving partial scholarships had the highest graduation rate (41%), followed by non-scholarship athletes (38%), and full scholarship athletes (27%). Among black athletes, those receiving full scholarships had the highest graduation rate (24%), followed by partial scholarship athletes (20%), and non-scholarship athletes (11%). Examination of revenue sports demonstrated that white football players had the next-to-worst graduation rate (27%). Among black athletes, track had twenty-two athletes and none graduated.

Marcotte (1986) found basketball players to be enrolled in significantly fewer number of terms than nonathletes (7.1 to 9.0). Finally, there was no significant difference in graduation rate, with more basketball players graduating (17.6%) compared to nonathletes (13.7%).

Long and Caudill (1991) used data from the Cooperative Institutional Research Program (CRIP) by the American Council on Education which surveyed 10,000 freshman entering 487 colleges and universities in 1971 and a subsequent follow-up survey in 1980. Male and female athletes who attended colleges and universities in the early 1970s had higher graduation rates than other students. They found male varsity athletes had a higher probability of graduating from college than nonathletes. Holding other determinants constant, athletic participation was estimated to raise the graduation probability for males by approximately 4%. Female athletic participation was associated with an increase in probability of obtaining a degree.

Long and Caudill (1991) also found male athletes significantly more likely earned more money early in their career. Those who participated in athletics enjoyed about a 4% income advantage over comparable individual who did not compete in athletics during college. Female athletes also earned more, but the difference was not significant.

Pascarella and Smart (1991) also used the CRIP data to examine educational outcomes for men who attended a single undergraduate institution. Athletes were significantly more likely than nonathletes to actually complete their bachelor's degree. Athletic participation also had a modest positive net effect on college academic achievement, particularly for whites.



Mulder (1990) found that for the graduating classes of 1983-88 of a small Midwest college, a greater portion of athletes graduated than nonathletes. Approximately 57% of athletes graduated compared to only 46% of nonathletes.

Wood (1987) found no significant difference in the graduation rates of male athletes and male nonathletes after four, five and six years. A greater percentage of athletes (24.7%) graduated compared to nonathletes (16.6%). He also found no significant difference in the graduation rate between athletes and nonathletes admitted conditionally and unconditionally.

Skelton (1994) compared graduation rates of all freshman and transfer student-athletes and all freshman nonathletes entering Delta State University from the fall of 1984 to spring 1988. Athletes and nonathletes had similar graduation rates, 44.3% to 42.2%. However, female athletes had a much higher graduation rate than male athletes and nonathletes. Almost fifty-six percent of female athletes graduated compared to only 41.0% of male athletes and 42.2% of nonathletes. White student-athletes had a higher graduation rate than their black counterparts, 46.9% compared to 34.1%. Also, black athletes had a lower graduation rate than black nonathletes, 47.2% compared to 34.1%. Student-athletes participating in the major sports of football, basketball, and baseball had much lower graduation rate, 40.3% to 53.9%, than those participating in minor sports.

The NCAA provides annual reports of graduation rates of Division I institutions. Over the past four years, scholarship athletes have had higher, or virtually the same graduation rate as other students. Of the freshman class of 1990, 58% of athletes graduated within six years compared to 56% of other students. However, only 45% of men's basketball players graduated. Black male basketball players had the lowest graduation rate of any group

at 39% (Ethier, 1997). Scholarship athletes also had higher graduation rates than nonathletes (58% to 57% both years) for the entering classes of 1989 and 1988 (Naughton, 1996a; Blum, 1995b). Male basketball players, especially black players, graduated at a significantly lower rate than their male counterparts. Only 44% of male basketball players entering in 1989 graduated. Only 39% of black male players graduated, while 53% of white male players graduated. For the entering class of 1988, only 37% of black male players graduated compared to 50% of white male players (Naughton, 1996a; Blum, 1995b).

#### Other Student-Athlete Academic Studies

Ervin et al. (1985) investigated the academic achievement of 49 freshman basketball and football players enrolled in the developmental studies program at the University of Georgia from 1981-83. The developmental studies program provided English, Mathematics and Reading instruction as well as intensive counseling and tutorial services. Participants were grouped two ways, by SAT scores and high school GPA. The SAT score groups consisted of individuals whose score was equal to or above 700 and those below 700. The high school GPA groups consisted of those with a GPA equal to or above 2.5 and those below 2.5.

The second-quarter cumulative GPA in developmental courses was used for comparison because it was based on more courses than the first-quarter GPA and it included more students than the third-quarter. SAT scores had a significant positive relationship to the number of academic courses taken in high school. SAT score also had a significant positive relationship to the second-quarter GPA. There was also significant negative relationship between SAT scores and the number of developmental courses needed. High school GPA



was related to the number of high school academic courses completed and second-quarter developmental studies GPA.

Brede and Camp (1987) classified football and men's basketball players competing during 1982-83 into three educational achievement groups. Student-athletes were rated by their coaches as having high, average, or low athletic ability. They were also rated by the athletic department's academic advisor in a similar manner based on ACT scores, high school curriculum, college course selection, and degree progress. The study examined five related measures of educational achievement: total credit hours enrolled in each enrollment period, credit hours passed according to grade reports and resulting GPA after each enrollment period, and credit hours passed according to official transcripts and official GPA.

Thirty-one students were grouped as passing easily, which meant they tended to take more credit hours each semester (14 or more), passed more credit hours at the end of each semester, passed more credit hours by year's end, and had better GPAs. Ninety-two student-athletes were termed as just getting by, meaning they took nearly the same amount of courses, but did not pass nearly as many. They had a GPA of slightly above 2.0 and took intersession and summer school to make up for deficiencies. Struggling along student-athletes were rated as low academic ability. Forty-four student-athletes were classified in this category. These students took nearly the same amount of credits, but passed only about 20%. They had trouble meeting minimum university, conference, or NCAA eligibility requirements.

Gurney and Stuart (1987) examined how competition and special admission status affected the academic achievement of freshman football and basketball players at six private Division I-A universities. Athletes who competed performed as well as those that did not compete. There was no significant difference in semester of competition (2.06 to 2.05),

cumulative college GPA (2.14 to 2.25), and cumulative hour passed (24.18 to 25.28). Athletes who did not compete were significantly more likely to attempt more credit hours (27.6 to 26.6). As one might suspect, special admit student-athletes did not perform as well as those admitted normally. Special admit student athletes had significantly lower cumulative GPAs (2.02 to 2.38) and passed significantly fewer cumulative credit hours (23.9 to 25.8).

Bryant and Clifton (1990) investigated the effect athletics participation on the in-season vs. out-of-season GPA of full-time student-athletes at Trenton State University (now, the College of New Jersey). Student-athletes who participated in sports which season spanned two semester, such as basketball, were eliminated from the study. They found the mean in-season GPA (2.50) to be higher than the mean out-of-season GPA (2.46). However, they also found that in most cases, athletes took significantly fewer credits in-season.

Pascarella, Bohr, Nora, and Terenzini (1995) used freshman students from eighteen institutions participating in the National Study of Student Learning (NSSL) to test and re-test the reading comprehension, mathematics, and critical thinking parts of the Collegiate Assessment of Academic Proficiency (CAAP). CAAP was developed by the ACT program to assess selected general skills typically acquired by students in their first two years of college.

Pascarella et al. (1995) found that male intercollegiate football and basketball players had significant net declines in their reading comprehension and mathematics scores compared to male nonathletes and male athletes in other sports by the end of their freshman year. The difference existed even after controlling for individual traits, such as pre-college reading comprehension, and institutional characteristics such as average entering reading comprehension. Football and basketball players also showed a disadvantage in critical



thinking, although not significant, at the end of their freshman year. Women athletes had significantly less development in reading comprehension than nonathletes.

#### Summary of Student-Athletes' Academic Achievement

Student-athletes were not as well prepared to enter college as nonathletes. However, once in college, studies comparing the academic achievement and graduation rates of student-athletes once in college were inconclusive. In virtually every study examining college preparation, student-athletes had a lower high school GPA and lower college entrance exam scores. Male athletes tended to be less prepared than female athletes. Black athletes were less prepared than white athletes. Athletes competing in revenue sports, primarily men's basketball and football, were less prepared than those competing in non-revenue sports.

Approximately half the studies showed the academic achievement and graduation rate of student-athletes to be no different or significantly better than nonathletes; still others found their achievement to be lower, sometimes significantly. Although, there were findings that were consistent within the student-athlete group. White student-athletes appeared to do significantly better than black athletes. Female student-athletes achieved better than male athletes. Finally, student-athletes in revenue sport did not achieve as well as those in non-revenue sports. These findings may be attributable, in part, to the fact that these same student-athlete cohorts were less prepared to enter college.

## CHAPTER III

### METHODS

The purpose of this study was to compare the academic achievement of student-athletes with their nonathlete counterparts at the University of North Dakota (UND), a NCAA Division II institution. In order to make this comparison, cohorts of student-athletes and nonathletes were analyzed according to cumulative college GPA, ACT composite scores, annual credits earned, S-U course work, repeated course work, and if they had ever been placed on academic probation. Data was obtained through the UND Office of Admissions and Records for official university records and transcripts of all athletes and a stratified random sample of nonathletes for the 1995-96 academic year.

#### Hypotheses

The study was designed to test the following null hypotheses:

- H<sub>01</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes.
- H<sub>02</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to gender.
- H<sub>03</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to academic classification level.



- H<sub>04</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to academic college.
- H<sub>05</sub> There is no significant difference in the ACT scores of student-athletes compared to nonathletes.
- H<sub>06</sub> There is no significant difference between the annual credits earned by student-athletes compared to nonathletes.
- H<sub>07</sub> There is no significant difference between the number of S-U courses taken by student-athletes compared to nonathletes.
- H<sub>08</sub> There is no significant difference between the number of repeated credit hours taken by student-athletes compared to nonathletes.
- H<sub>09</sub> There is no significant difference between the number of student-athletes on academic probation compared to nonathletes.
- H<sub>010</sub> There is no significant difference between the cumulative college grade-point-average of student-athletes in revenue generating sports compared to student-athletes in non-revenue sports.

In developing this study, attention was devoted to the methods section of previous studies (Wood, 1987; Stanton, 1988; Sheffield, 1989; Hicks, 1991; Moode, 1991; Skelton, 1994). This study incorporates much of the framework used by Stanton (1988), particularly a stratified random sample. While the aforementioned studies and others have examined the issue of academic achievement and athletic participation, differences have existed in type of institution, the focus of study, and analysis of data.

### Description of the University

The University of North Dakota, a state-funded university, is the largest institution of higher education in North Dakota offering 100 majors to approximately 10,500 students. Approximately 57% of UND's enrollment comes from North Dakota with an additional 25% enrolling from the neighboring state of Minnesota. According to University records (1996), there were approximately 10,500 undergraduate students and 1,500 graduates/professional students during the time of this study. The student body was approximately 88% white and 49% were females. A National Disaster flood in the Spring of 1997 and changes in how to calculate student enrollment reduced enrollment from approximately 12,000 in 1995-96 to 10,500 in 1998-99.

The University of North Dakota is a National Collegiate Athletic Association (NCAA) Division II and Northern Collegiate Conference member, offering the following sports at this level: men's and women's basketball, swimming, track and field, and cross country; men's baseball, football, golf, and wrestling; and women's volleyball and softball. UND also has one sport, ice hockey, for which it is a NCAA Division I and Western Collegiate Hockey Association member. The Office of Admissions and Records listed 279 student-athletes for the academic year 1995-96. Nearly 75% (208) of the student-athletes were men.

### Design of the Study

The records of all 279 student-athletes eligible to participate and registered full-time, twelve or more semester hours, at UND during the Fall and/or Spring 1995-96 academic year were included in this study. A stratified random sample of nonathletes was matched to the student-athletes by academic classification level, academic college, and gender (see Table 1).



Academic classification level and college was used to ensure a similarity in course work difficulty and to circumvent the potential impact of a "hideaway curriculum" (Sperber, 1990), if one indeed does exist among athletes. As stated in the delimitations in Chapter I, race was not analyzed due to the small percentage of non-white students at UND. Also, age was limited to 24 years-old since that is the age of the oldest student-athlete during the 1995-96 academic year.

Table 1. Matched Stratified Random Sample of Student-athletes and Nonathletes.

Gender		Classification					Total
		Freshman	Sophomore	Junior	Senior		
Male	College	A&S	2	17	11	11	41
		BPA	3	26	8	13	50
		CAS		11	2	4	17
		CTL		7	3	6	16
		ENGR	1	6	5	8	20
		FA&C		3	3	2	8
		HRD		5	6	4	15
		MED	1	4	4	2	12
		NURS		1			
		UC	5	23	1		29
	Total Male		12	103	43	50	208
Female	College	A&S	1	6	3	3	13
		BPA		3	3		6
		CAS		1			1
		CTL		3	4	2	9
		ENGR		1	2	1	4
		FA&C	1			1	2
		HRD	1	3	7	7	18
		MED		4	5	1	12
		NURS		2			
		UC	1	4	1		6
	Total Female		4	27	25	15	71

Note: Each number represents an equal and separate number of student-athletes and nonathletes. For example, under male, freshmen in Arts & Science there were two student-athletes which were matched with two nonathletes.

### Date Collection and Calculations

Data was obtained through the UND Office of Admissions and Records for official university records and transcripts of all student-athletes and a matched stratified random sample of nonathletes for the 1995-96 academic year. The groups were stratified according to gender, academic classification level, and academic college. In addition, age was limited to a maximum of twenty-four years of age as this was the oldest student-athlete included in the study. Students who were undecided and/or had not been admitted to a specific college were listed under University College (UC). Student-athletes who participated in more than one sport were listed only once in the student-athlete data when making comparisons between student-athletes to nonathletes. In comparisons of revenue and non-revenue student-athletes, multi-sport student-athletes were included in data for each respective sport they participated. For purpose of comparison, when using the variable Academic College, the Fine Arts and Communication College was combined with Arts and Science. Also, the College of Nursing was combined with the School of Medicine.

### Analysis

Descriptive analysis was conducted to provide frequencies and percentages for the relevant variables in the study. Independent t-tests, Type I full factorial two-way analysis of variance, and chi-square statistical tests were used to test the hypotheses. The independent variables were athletic participation, sport of participation, gender, academic classification level, and academic college. Cumulative college GPA, ACT composite score, annual credits earned, S-U credits, repeated course work, and academic probation status were the dependent variables. A critical level of  $P \leq .05$  was used.



### Overview

In Chapter III the methods of the study were presented. Specifically, the chapter addresses the methods implemented in order to answer the research questions. The following research areas were discussed: purpose, description of the university, design of the study, data collection, and analysis. A discussion of the results can be found in Chapter IV and a summary of the findings, conclusion, and recommendations are presented in Chapter V.

## CHAPTER IV

### RESULTS

The age of student-athlete and nonathlete groups was limited to less than or equal to 24. However, to ensure that no difference existed between age of groups, an independent T-test was conducted. There was no significant difference in the age of the two groups with the mean age and standard deviation being almost identical (See Table 2).

Table 2. T-test of Age of Student-athletes and Nonathletes

Group	N	Mean	Standard Deviation	P
Student-athlete	279	20.88	1.56	.824
Nonathletes	279	20.85	1.51	

#### Hypothesis One

There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes.

While student-athletes had a slightly higher, 2.86 compared to 2.76, mean GPA than nonathletes, the difference was not statistically significant ( $P=.058$ ; See Table 3). Therefore, the hypothesis of no difference is retained ( $P=0.058$ ).



Table 3. T-test of GPA of Student-athletes and Nonathletes.

Group	N	Mean	Standard Deviation	P
Student-athlete	279	2.86	.64	.058
Nonathletes	279	2.76	.62	

$t=-1.896$ ,  $df=556$

### Hypothesis Two

There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to gender.

There is not a statistically significant interaction between athletic participation and gender ( $F=.858$ ,  $df=1$ ,  $554$ ,  $P=.355$ ; See Table 4). Therefore, the hypothesis of no interaction is retained. No statistically significant difference existed between the mean GPA of student-athletes and nonathletes was found ( $F=3.64$ ,  $df=1$ ,  $554$ ,  $P=.057$ ; See Table 4). Thus, the hypothesis of no difference is retained. A statistically significant difference existed between the mean GPA of men and women ( $F=7.51$ ,  $df=1$ ,  $554$ ,  $P=.006$ ; See Table 4). Therefore, the hypothesis of no difference is rejected.

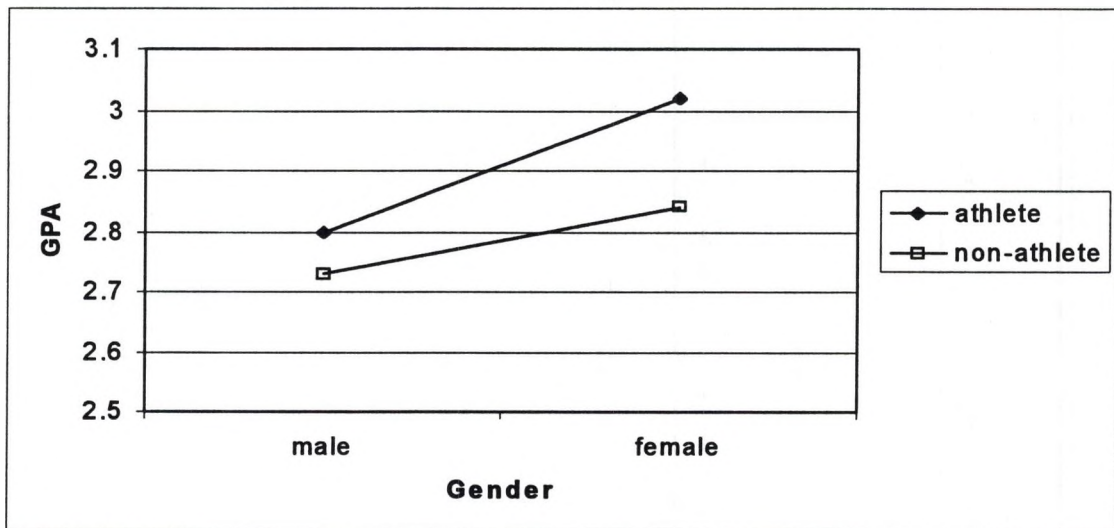
Table 4. Two-way ANOVA of GPA by Athletic participation and Gender.

Type I	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Observed Power
GPA Athlete vs nonathlete	1.420	1	1.420	3.637	.057	.007	.478
Gender	2.931	1	2.931	7.505	.006	.013	.781
Athlete vs nonathlete * Gender	.335	1	.335	.858	.355	.002	.152
Residual	216.337	554	.391				

$R^2=.021$

Male student-athletes had a higher, although not significantly, GPA than their nonathletes counterparts (See Figure 1). Similarly, female athletes had a higher, non-significant, GPA than female nonathletes. Overall, female student-athletes had the highest GPA (3.02) followed by female nonathletes (2.84), male student-athletes (2.80), and male nonathletes (2.73).

**Figure 1.** Relationship Between Athletic Participation and Gender.



### Hypothesis Three

There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes according to academic classification level.

There is not a statistically significant interaction between athletic participation and classification level ( $F=1.410$ ,  $df=3$ , 550,  $P=.239$ ; See Table 5). Therefore, the hypothesis of no interaction is retained. A statistically significant difference existed between the mean GPA of student-athletes and nonathletes ( $F=4.619$ ,  $df=1$ , 550,  $P=.032$ ; See Table 5). Thus, the



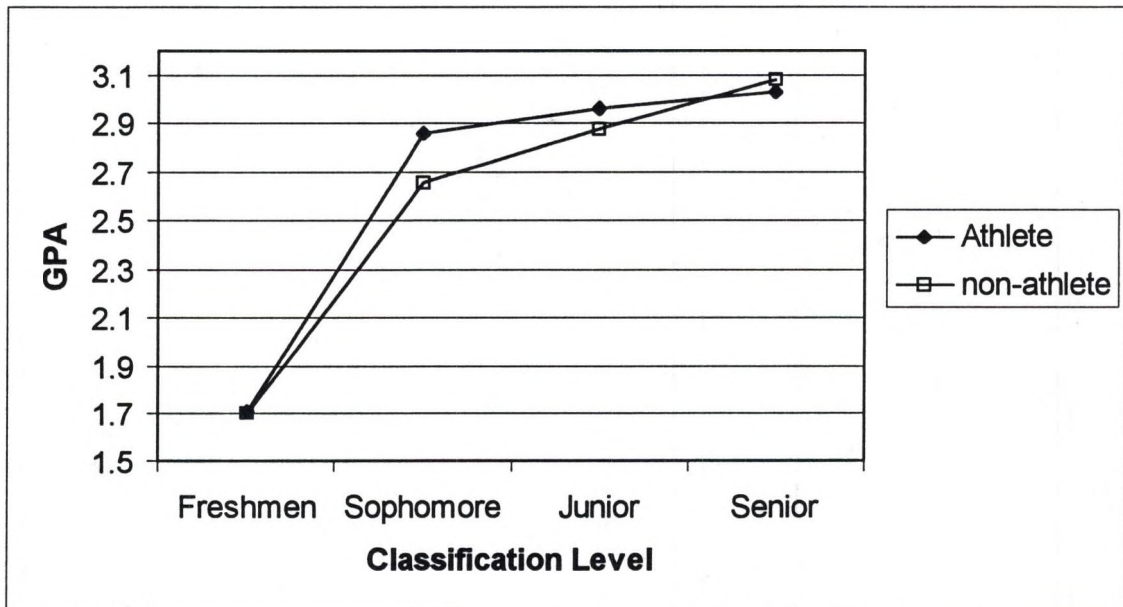
hypothesis of no difference is rejected. A statistically significant difference existed between the mean GPA among the various academic classification levels ( $F=53.36$ ,  $df=3$ ,  $550$ ,  $P<.001$ ; See Table 5). Therefore, the hypothesis of no difference is rejected.

Table 5. Two-way ANOVA of GPA by Athletic Participation and Academic Classification Level.

	Type I	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Observed Power
GPA	Athlete vs nonathlete	1.420	1	1.420	4.619	.032	.008	.574
	Year of School	49.211	3	16.404	53.356	<.001	.225	1.00
	Athlete vs nonathlete * Year of School	1.301	3	.434	1.410	.239	.008	.375
	Residual	169.091	550	.307				

$R^2=.235$

Student-athletes' and nonathletes' GPA increased in a similar fashion as they progressed from freshmen to seniors (See Figure 2). Student-athletes had a similar GPAs compared to nonathletes during the freshman, junior and senior years. However, student-athletes classified as sophomores had a significantly higher GPA than nonathletes ( $t=-2.77$ ,  $df=258$ ,  $P=.006$ ).

**Figure 2.** Relationship Between Athletic Participation and Academic Classification Level

#### Hypothesis Four

There is no significant difference between the cumulative college grade-point-average of student-athletes compared to nonathletes while according to academic college.

There is not a statistically significant interaction between athletic participation and classification level ( $F=.578$ ,  $df=7$ ,  $542$ ,  $P=.774$ ; See Table 6). Thus, the hypothesis of no interaction is retained. A statistically significant difference existed between the mean GPA of student-athletes and nonathletes ( $F=3.910$ ,  $df=1$ ,  $542$ ,  $P=.049$ ; See Table 6). Thus, the hypothesis of no difference is rejected. A statistically significant difference existed between the mean GPA among the various academic colleges ( $F=8.37$ ,  $df=7$ ,  $542$ ,  $P<.001$ ; See Table 6). Therefore, the hypothesis of no difference is rejected.



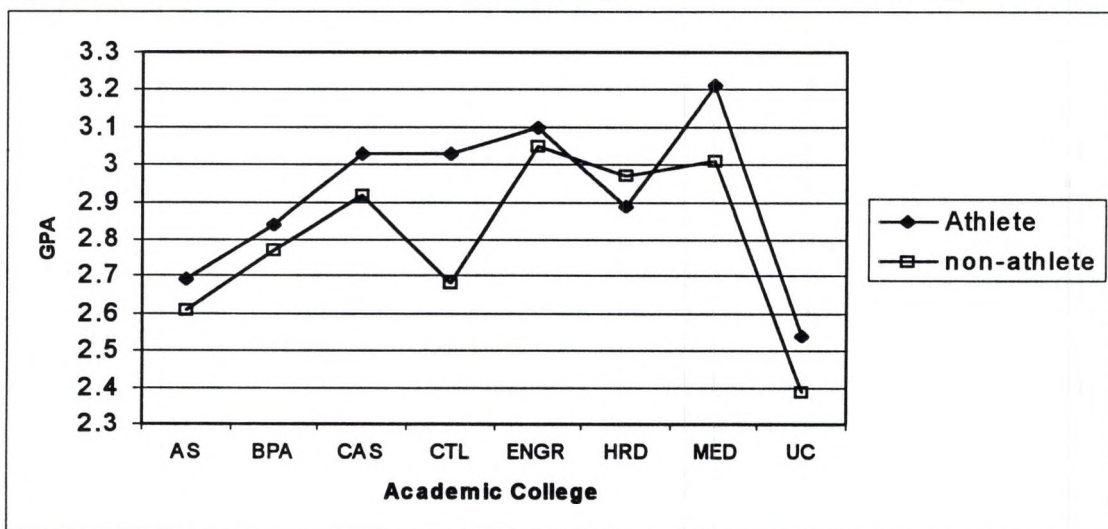
Table 6. Two-way ANOVA of GPA by Athletic Participation and College.

	Type I	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Observed Power
GPA	Athlete vs nonathlete	1.420	1	1.420	3.910	.049	.007	.506
	College	21.274	7	3.039	8.368	<.001	.098	1.00
	Athlete vs nonathlete * College	1.469	7	.210	.578	.774	.007	.252
	Residual	196.859	542	.363				

$R^2=.109$

Student-athletes had slightly higher GPAs in all academic colleges except Human Resources and Development (See Figure 3). However, the only significant difference found was among students in CTL, where student-athletes had a higher GPA than nonathletes ( $t=-2.531$ ,  $df=48$ ,  $P=.015$ ). Among student-athletes, those in the School of Medicine/College of Nursing had the highest GPA (3.21) followed by Engineering students. Students in these colleges also had the highest GPA among nonathletes, although in reverse order. Students in University College/Undecided had the lowest GPA in both groups.

Figure 3. Relationship Between Athletic Participation and Academic College.



### Hypothesis Five

There is no significant difference in the ACT score of student-athletes compared to nonathletes.

Student-athletes had a slightly lower, 21.83 to 22.30, mean ACT score than nonathletes, however, the difference was not great enough to reject the null hypothesis (See Table 7). Thus, there is not a statistically significant difference between the two groups ( $P=0.262$ ).

Table 7. T-test and Mean ACT Composite Score of Student-athletes and Nonathletes.

Group	N	Mean	Standard Deviation	P
Student-athlete	157	21.83	3.81	.262
Nonathletes	211	22.30	4.06	

$t=1.124$ ,  $df=366$

### Hypothesis Six

There is no significant difference between the annual credits earned by student-athletes compared to nonathletes.

Student-athletes earned more annual credits than nonathletes (See Table 8). The difference in the mean annual credits earned was great enough to reject the null hypothesis. Thus there was a statistically significant difference between the two groups ( $P=.001$ ).



Table 8. T-test of annual credits earned by Student-athletes and Nonathletes.

Group	N	Mean	Standard Deviation	P
Student-athlete	279	27.17	4.44	<.001
Nonathletes	279	25.86	4.99	

$t=-3.277$ ,  $df=566$

## Hypothesis Seven

There is no significant difference between the number of S-U courses taken by student-athletes compared to nonathletes.

The number of S-U credits taken by student-athletes and nonathletes was almost identical, 1.18 to 1.28 (See Table 9). The difference was not great enough to reject the null hypothesis and thus, there is not a statistically significant difference between the two groups.

Table 9. T-test of S-U credits taken by Student-athletes and Nonathletes.

Group	N	Mean	Standard Deviation	P
Student-athlete	279	1.18	1.81	.491
Nonathletes	279	1.28	1.80	

$t=-0.689$ ,  $df=556$

## Hypothesis Eight

There is no significant difference between the number of repeated credit hours taken by student-athletes compared to nonathletes.

Student-athletes repeated less than half the mean credit hours as nonathletes (See Table 10). The difference in the mean values was great enough to reject the null hypothesis. Therefore, a statistically significant difference between the two groups ( $P=.001$ )

Table 10. T-test of repeated credit hours taken by Student-athletes and Nonathletes.

Group	N	Mean	Standard	
			Deviation	P
Student-athlete	279	1.50	3.72	<.001
Nonathletes	279	3.18	5.98	

$t=3.981$ ,  $df=556$

### Hypothesis Nine

There is no significant difference between the number of student-athletes who have been placed on academic probation compared to nonathletes.

Student-athletes were significantly less likely to have been placed on Academic Probation than nonathletes (See Table 11). Only 14% of student-athletes were placed on Academic Probation compared to 24.0% of nonathletes.

Table 11. Chi-Square and Crosstabulation of Student-athletes and Nonathletes by Academic Probation.

			Student-athlete	Nonathlete
Academic Probation	no	%(Count)	86.0 (240)	76.0(212)
	yes	%(Count)	14.0 (39)	24.0 (67)

$\chi^2=8.49$ ,  $df=1$ ,  $P=.004$



## Hypothesis Ten

There is no significant difference between the cumulative college grade-point-average of student-athletes in revenue generating sports compared to student-athletes in non-revenue sports.

Women's Cross Country, had the highest team GP, 3.68, followed women's golf, women's track, and volleyball, 3.56, 3.49, and 3.26, respectively (See Table 12). All of these were non-revenue sports. The four revenue sport teams all had GPA which fell in the bottom half of total sixteen team sports. Among revenue sports teams, women's basketball had the highest GPA, 2.79, followed closely by hockey at 2.75. Men's basketball had the lowest team GPA, 2.50, of any team.

Table 12. Mean GPA of Revenue Sport Student-athletes and Non-revenue Sport Student-athletes.

	N*	GPA		Standard Deviation
		Revenue	Non-Revenue	
Cross Country-	6	-	3.68	.24
Golf- Women	6	-	3.56	.26
Track- Women	13	-	3.45	.34
Volleyball	8	-	3.26	.39
Cross Country-	13	-	3.16	.51
Track- Men	25	-	3.19	.49
Baseball	33	-	2.92	.44
Swimming-	21	-	2.91	.47
Softball	13	-	2.90	.47
Basketball-	10	2.79	-	.56
Hockey	25	2.75	-	.46
Football	68	2.70	-	.58
Golf- Men	9	-	2.70	.69
Wrestling	14	-	2.69	.79
Swimming-	22	-	2.67	.75
Basketball-Men	12	2.50	-	.488
Total	298	2.70	3.01	

Overall, student-athletes who participated in revenue sports had a statistically significantly lower mean GPA, 2.70 compared to 3.01, than those who participated in non-revenue sports ( $P=.000$ , See Table 13). Thus, the hypothesis that no difference existed between the GPA of the two groups was rejected.

Table 13. T-test of GPA of Revenue Sports Student-athletes and Non-revenue Sports Student-athletes

Sport	N*	Mean	Standard Deviation	P
Revenue	115	2.70	.63	<.001
Non-revenue	183	3.01	.55	

$t=4.416$ ,  $df\ 296$

\* Greater than 279 because some athletes played more than one sport.



## CHAPTER V

### SUMMARY, DISCUSSION, AND RECOMMENDATIONS

The purpose of this study was to compare the academic achievement of intercollegiate student-athletes to nonathletes. Also, student-athletes competing in revenue sports were compared to those in non-revenue sports. All students listed as participating in a sport by the Office of Records and Admissions were included in the study. The student-athlete group was matched with a stratified random sample of nonathletes. The groups were stratified according to gender, academic classification level, and academic college. In addition, age was limited to a maximum of twenty-four years of age as this was the oldest student-athlete included in the study.

Academic achievement was comprised of several factors with cumulative college GPA being the primary measure. Other academic achievement factors included whether students were placed on academic probation at some point in their college career, the number of credit hours repeated, the number of credit hours earned, and the number of S-U courses taken. ACT composite scores were used as a measure to compare the academic preparation of student-athletes to nonathletes.

This study found no significant difference in the primary measure of academic achievement, cumulative college GPA, between student-athletes and nonathletes. In addition, student-athletes were significantly less likely to have been placed on Academic Probation,

repeated significantly less credit hours, and earned significantly more annual credits than their nonathlete counterparts. There also was no significant difference in the average number of S-U credits taken and the ACT composite scores of student-athletes and nonathletes. Finally, the cumulative college GPA of student-athletes participating in revenue sports was significantly lower than those participating in non-revenue sports.

### Summary, Findings, and Discussion

The purpose of this study was to compare the academic achievement of student-athletes to nonathletes or put another way, to determine if the "dumb jock" is a myth or a reality. This study also addressed broader questions surrounding intercollegiate athletics. Are academics indeed being compromised for the sake of athletics? Is the skepticism surrounding the academic integrity of intercollegiate athletics and academic achievement of student-athletes warranted?

The "dumb jock" stereotype appears to be founded more on myth and misconception than reality and fact, based on the findings of this study and others. Overall, this study found that student-athletes' academic achievement surpassed their nonathlete counterparts. The primary measure of academic achievement, cumulative college GPA, revealed no significant difference between student-athletes and nonathletes. Studies by Davis and Cooper (1934), Stuart (1985), Mackenzie (1981), Lewis and Marcopulos (1989), Stanton (1988), and Sheffield (1989) all found that student-athletes had GPAs similar to or better than nonathletes. Studies of notable importance are those by Wood (1987) and Moode (1991) because these were also conducted at Division II institutions. In both studies, no significant difference was found between the GPA of student-athletes and nonathletes, as was the case in this study.



Upon initial examination, student-athletes and nonathletes had similar GPAs. However, when controlling for other variables, student-athletes achieved significantly higher GPAs than nonathletes. This was true when controlling for academic classification level. Stanton (1988) found similar results with regard to academic classification level, but he also used ACT scores as a covariate.

Comparing each classification level revealed that students classified as freshman achieved poorly in both groups. While disconcerting, it was not a surprise since only students who did not earn the minimum number of full-time credits (12) or those who attended only one semester would be listed as freshman after one full academic year. Among sophomores, the largest classification group, student-athletes had a statistically significant higher GPA than their nonathlete counterparts. This may, in part, be attributable to the fact that student-athletes are required to attend study hall as freshman, whereas nonathletes are not. Many of those who were classified as sophomores had been in the required freshman study hall during the academic year. No significant difference was found between the GPA of student-athletes and nonathletes among students classified as juniors and seniors. Stanton (1988) found freshman and sophomore student-athletes performed significantly better than nonathletes, while there was no significant difference among juniors and seniors.

Student-athletes had a significantly higher GPA than nonathletes when controlling for academic college. The academic achievement of student-athletes to nonathletes within each academic college was similar, except for students in the Center for Teaching and Learning, where student-athletes had a statistically significant higher GPA than nonathletes. No logical explanation for this difference could be ascertained.

In this study, female student-athletes had the highest mean GPA of any gender group. Moode (1991), Sheffield (1989), Stanton (1988), as well as Purdy et al. (1981, 1982) found female student-athletes to have the highest GPA. However, when controlling for gender, this study found no significant difference between the GPA of student-athletes and nonathletes. Furthermore, no significant differences were found in GPA comparisons of female student-athletes to nonathletes or between male student-athletes and nonathletes. This differed somewhat from what other studies found. Stanton (1988) found a significant difference in the GPA of student-athletes according to gender when controlling for ACT. He found male student-athletes to have a significantly higher GPA than nonathletes, while female cohorts had similar GPAs. Moode (1991) found male student-athletes performed significantly worse than nonathletes. He also found no significant difference between the achievement of female student-athletes and nonathletes.

Additional findings in this study and others further dispel the myth of student-athletes being dumb jocks. It was revealed in this study that student-athletes were significantly less likely to be placed on Academic Probation than nonathletes. Almost twice as many nonathletes were placed on academic probation at some point in their academic career than were student-athletes. Furthermore, student-athletes repeated significantly less, about half, the number of credits as nonathletes; at the same time, they earned significantly more annual credits. Stuart (1985) found no significant difference between the academic status, number of courses repeated, and mean semester credit hours taken. The present study also found no significant difference in the number of S-U courses taken by student-athletes and nonathletes.



Stanton (1988) had a similar finding where student-athletes and nonathletes attempted a comparable number of pass/fail courses.

The relative success of student-athletes compared to nonathletes may, in part, be attributable to the vested interest student-athletes, coaches, and the athletic department, in general, have in student-athletes performing well academically in order to stay eligible to play. Thus, student-athletes' class attendance and academic progress are monitored much more closely than nonathletes. In addition, they are required to attend study hall as freshman, whereas nonathletes are not. Student-athletes also may be provided with a more structured time schedule and easier access to tutorial support.

There are two issues which may perpetuate and even stimulate the myth of the dumb jock. First, there is the lack of college academic preparation of student-athletes, particularly among male student-athletes, student-athletes in revenue sports, and minorities student-athletes. In the current study no significant difference was found in the ACT composite score of student-athletes and nonathletes. This was different from Stuart (1985) and Sheffield (1989) who found student-athletes had a significantly lower ACT than nonathletes. Studies by Larsen (1973), Purdy et al. (1981, 1982), Stanton (1988), Mulder (1990), Sellers (1992), Maloney & McCormick (1993) and Naughton (1997) also found athletes had lower ACT/SAT scores, however, no direct statistical tests were conducted to determine if the differences were significant. Purdy et al. (1981, 1982) found male and black athletes had significantly lower high school GPA and ACT/SAT scores. Sellers (1992) found that white student-athletes had a higher high school GPA and a significantly higher SAT score than black athletes. Naughton (1997) found men's basketball and football players on teams that finished

in the top 25 during 1996-97 had much lower high school GPAs and college entrance exam scores.

Admitting student-athletes who are ill-prepared or not as well prepared as nonathletes, as evidenced by low high school GPAs and college entrance exam scores, probably contributes to the "dumb jock" image by both students and faculty. This feeling is often exacerbated when Athletic Departments form their own Academic Support Programs to address student-athletes lack of academic preparation in order to keep them eligible to play.

Second, the lack of academic achievement of student-athletes who participate in revenue sports may further perpetuate and stimulate the myth of the dumb jock. Typically, revenue sports are the high profile sports, such as men's basketball and football which receive the majority of publicity and scrutiny. This study found student-athletes participating in revenue sports had significantly lower GPAs compared to their non-revenue cohorts. This finding is consistent with other studies that compared academic achievement of student-athletes participating in revenue sports with those in non-revenue sports and/or nonathletes. Larsen (1973) found men's basketball had the lowest GPA and football had the third lowest when comparing sports. Purdy et al. (1981, 1982) found men's basketball and football to have the lowest GPAs by sport. They also found student-athletes who played football had the lowest graduation rate. Maloney and McCormick (1993) found student-athletes in non-revenue sports had nearly identical GPAs compared to nonathletes with similar backgrounds. However, athletes in revenue sports did not perform as well as their peers. They found men's basketball and football to have the lowest GPAs. Skelton (1994) found that student-athletes



participating in the major sports of football, basketball, and baseball had a much lower graduation rate than those participating in minor sports.

The lower academic achievement of student-athletes in revenue sports may, in part, be due to the fact that they are often the least prepared for college. The high profile nature surrounding revenue sports may increase the pressure and time demands placed upon these student-athletes and, thus, diminish their ability to achieve academically.

On the basis of this study's findings and those of others, it does not appear that there is widespread compromise of academics for the sake of athletics. While the research by Leonard (1986) and Sack (1987/1988) on student-athletes feeling pressured to take easy courses or cheat, the Jan Kemp case, and the credit scandal involving Southeastern College of the Assemblies of God Distance Learning Division are all abhorrent examples where academics were compromised for the sake of athletics, in many instances, student-athletes achieved academically as well as, if not better, than nonathletes with no hint of improprieties. Thus, much of the skepticism surrounding the academic integrity of intercollegiate athletics and academic achievement of student-athletes is unwarranted. This is not to say that concern and attention should not continue to be directed toward the academic integrity of intercollegiate athletics. By its very definition, academic integrity means firm, complete, and/or undivided adherence to moral and established educational and scholarly standards. Until this definition is met, concern over the academic integrity is warranted.

While graduation rates were not considered in the findings of the current study, it is important to examine the studies and literature reviewed on the subject. Graduation rates are an important aspect of the academic achievement of student-athletes and they may further

dispel the myth of the "dumb jock". Overall, there are studies that show student-athletes graduate at a lower rate, while others show athletes graduating at a higher rate or at a similar rate. Studies at Division II institutions by Wood (1987) and Skelton (1994) found that student-athletes graduate at a higher percentage compared to nonathletes. Long and Caudill (1991), using data from the American Council on Education, found athletic participation increased the probability of graduating. Pascarella and Smart (1991), using the same data, athletes were significantly more likely to bachelor's degree. Ethier (1997), Mulder (1991), Marcotte (1986), and Mackenzie (1981) also found athletes to graduate at a higher rate. These findings contradict those of Larsen (1973) and Purdy et al. (1981, 1982) who found student-athletes graduated at a lower rate than nonathletes.

#### Limitations

A limitation of the study is that the University of North Dakota is an institution with a very homogenous student population. The study findings may not be generalizable to many Division II university with similar strong academic and athletic programs if they have a more diverse student population. Furthermore, the findings of this study may not be fully generalizable to Division I institutions, which often have many more students and may put more emphasis on athletics. This also applies to Division III institutions that often have fewer students and may put less emphasis on sports.

Another limitation is that not all student-athletes may have been included in the study. While the Office of Admission and Records supplied the data for all athletes listed as participating in one or more sports, this may have only included those who were on the traveling teams or eligible to letter and thus, excluding red-shirt and practice squad athletes.



For example, under women's basketball only 10 student-athletes were listed and similarly, only 8 were listed under women's volleyball. It would be very difficult to hold a practice and scrimmage with these small numbers. However, with a total of 279 athletes, 19 of whom participated in more than one sport, these data were a more than adequate sample of athletes for the purpose of this study.

Another limitation was that only having ACT scores as the single measure of academic preparation may not have been sufficient. The original intent was to include high school GPA, high school rank, and admission status as factors related to academic preparation. However, these data were unavailable.

It was also the intent to compare the number of semesters it took student-athletes and nonathletes to attain their respective academic classification level. For example, it would have been interesting to note if it took student-athletes nine semesters to become seniors compared to ten for nonathletes or vice versa. However, computation problems made this impossible to calculate. If all of the students who earned credits via a CLEP test, summer session enrollment, and at other institutions were eliminated, the remaining sample would be very small.

Another aspect that would have added to the study would have been the inclusion of graduation rates using the same method of calculation for each athletic participation sample. This information was not included because of time and methodology considerations involved in tracking students.

### Recommendations

Several recommendations are made based on the findings and conclusions of this study. First, Athletic Departments and Offices of Academic Affairs should make a concentrated effort to dispel the myth of the "dumb jock" and the associated negative connotations. Information, including the findings of this study and others, on the perceived and actual academic achievement of student-athletes should be disseminated to students, faculty, alumni, and the public. Athletic Departments, in concert with Offices of Academic Affairs, should publish data each semester comparing the academic achievement of student-athletes and nonathletes within the same university department or college. Furthermore, courses such as those in Psychology and Sociology that discuss perceptions, stereotypes, and awareness of minorities should also address student-athletes. Cultural awareness and diversity programs that investigate and hold forums discussing the impact of negative stereotypes and generalizations toward women and minorities should include discussions about student-athletes.

Second, College or University Presidents, Vice Presidents for Academic Affairs, Deans, Athletic Directors, and coaches need to stress the importance of maintaining academic integrity and high levels of academic achievement within the Athletic Department and among student-athletes. Interest and attention should be given to every student-athlete's academic endeavors and progress. Freshman student-athletes should be shown examples and exposed to role models who have succeeded academically as well as athletically.

Third, more studies need to be conducted at the NCAA Division II level comparing the academic achievement of student-athletes to a stratified random sample of nonathletes.



This would help to dispel misconceptions about the academic achievement of student-athletes, at the same time, addressing concerns about a potential hideaway curriculum or easy major for student-athletes. Even at the Division I and III levels, similar studies need to be conducted. Most of the research and literature regarding the academic achievement and integrity of student-athletes and universities concentrates on Division IA.

Fourth, universities and colleges need to provide all freshmen, regardless of whether or not they participate in intercollegiate athletics, with more counseling and guidance to better prepare them for the adjustments that college life entails. It is clear from this study and others that many freshmen, both student-athletes and nonathletes, do not perform well academically. More effective policies and programs directed toward students adapting to their new environment can only help them reach the ultimate goal of graduating in a timely manner.

Fifth, studies need to be conducted on what happens to students, both athletes and nonathletes, that are placed on probation. Are these students given the proper guidance necessary to improve and continue their academic endeavors? Are they made aware of and given proper academic remediation and support necessary to improve and continue their academic endeavors? What proportion of these students, in fact, graduate?

Sixth, further studies which examine the lack of college academic preparation on the part of student-athletes need to be conducted. Whether or not student-athletes are given preferential admission more often than nonathletes should be investigated.

Seventh, more research should be conducted about the academic achievement of student-athletes in revenue sports compared to athletes in non-revenue sports. This research needs to investigate why these student-athletes are not as well prepared for college, do not

perform as well, and the pressure and time commitments placed upon these individuals compared to student-athletes in non-revenue sports.

Finally, studies should be conducted that compare the academic achievement of student-athletes and nonathletes at Division II institutions whose revenue sports, particularly men's basketball and football, consistently finish in the top 25. This should be compared to similar data gathered at randomly selected institutions that have similar, but not as successful, athletic programs. This may provide further insight into the academic achievement of student-athletes. It would also address whether institutions with strong athletic programs are recruiting individuals strictly as athletes rather than as student-athletes.

The following recommendations are based upon studies and literature used to review important aspects of the academic achievement of student-athletes which were not part of the findings in the current study. First, the calculation of Graduation Rates should be standardized. The Student Right-to-Know and Campus Security Act attempted to enlighten potential athletes by providing the graduation rates of student-athletes. However, as Mallette (1992), Naughton (1996b), and Lederman (1991a) have pointed out, comparisons of graduation rates under the current system using the NCAA's Graduation Rates Disclosure Form should be interpreted cautiously at best. Factors such as who to include under "athletes" and what methods of calculation are used can inflate graduation rates by as much as 100% (Mallette, 1992).

Second, Congress should amend the Students Right-to-Know and Campus Security Act to require institutions to use the same method of calculation and also include the graduation of nonathletes for comparison. This would enable potential student-athletes and



the public to have a more valuable comparison of how successful universities and colleges are at graduating athletes.

Third, studies need to be conducted on what happens to student-athletes who do not succeed as athletes. Are these students given the proper financial and academic support necessary to graduate or are they systemically discouraged from continuation in the college or university? Do these former student-athletes, in fact, graduate?

Finally, universities and colleges need to strengthen and expand the role of trustees and Faculty Athletic Representatives (FARs). Too often, trustees and FARs are in liaison with the athletic department or have little more than a figurehead role. Faculty, staff, and student representatives need to be included as part of an objective governing body at each institution that helps determine student-athlete applicant qualifications and abilities, student-athlete eligibility, reports and analyzes student-athlete academic data, hiring and evaluation of coaches and athletic administrators, and the evaluation of the athletic department as a whole. University or college presidents should steer these bodies, which should also include the athletic director, and FARs. The rest of these governing bodies would be comprised of a 40%, 40%, 20% split of members from the faculty, staff, and student University Senates, voted in by their respective peers. Such a governing bodies would help further the reform of intercollegiate athletics by circumventing the pressure, both internal and external, on coaches and university administrators to "win at any cost".

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