

# **The Dilemma of the Student Athlete: Balancing Athletics and Academics**

Herbert D. Simons and Derek Van Rheenen

with

Martin V. Covington

University of California, Berkeley

## **Abstract**

Student athletes face a dilemma. They are expected to be both successful in the classroom as well as on the field of play. The dilemma arises because the athletic and academic domains of their lives are often in conflict; intercollegiate athletes face the difficult task of resolving this conflict by striking a balance between them. The purpose of this study is to explore the effect of this athletic academic relationship on academic performance at an academically elite Division I university.

Subjects of this study were 361 student athletes enrolled at the University of California, at Berkeley, participating in 21 men's and women's sports. The student athletes were administered a paper and pencil survey consisting of 300 Likert scale items. Students responded on a five point scale indicating the degree to which the statements in the survey were descriptive of them. The factors studied were demographic and athletic status, academic preparation, study strategies and problems, achievement motivation, self-perception, and athletic-academic identification. A series of regression analyses were conducted with these factors as predictors of university grade point average.

The results showed that the strongest factors predicting academic performance were athletic-academic identification, academic preparation, and achievement motivation. Less important predictors were athletic status, demographic status and study factors. Highly predictive variables were SAT Math and SAT Verbal, high school grade point average, revenue status, academic self worth, self-handicapping behaviors, feelings of being exploited, and gender. Ethnicity, social status, metacognitive study strategies and problems played a weaker role in predicting academic performance.

Academically successful student athletes were more likely to be female, have higher SAT scores and high school grade point averages, and participate in non-revenue sports. They also had a higher academic self worth, exhibited fewer self-handicapping behaviors and were less likely to feel they were being exploited. Perhaps most importantly, these student athletes had a stronger academic identity relative to their athletic identity. Academically marginal student athletes were more likely to be male, had lower SAT scores and high school grade point averages, and participated in revenue sports. They also had a lower academic self-worth, exhibited more self-handicapping behaviors and were more likely to feel they are being exploited. These student athletes had a stronger athletic identity relative to their academic identity. The nature and explanation of each relationship is discussed. The non-cognitive factors of academic self confidence and the athletic-academic relationship are seen as providing important keys to academic success and failure. Finally, recommendations are made to help improve the academic performance of students athletes.

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## Introduction

There exists an underlying assumption within American higher education that intercollegiate athletics embodies a certain inherent anti-intellectualism. Universities, such as Berkeley, which promote both academic and athletic excellence, therefore face a dilemma, a dilemma unique to the American education system. A public emphasis upon intercollegiate sport is often interpreted to signal a debasement of purist academic goals and the intellectual rigors of a collegiate education. As a result, the promotion of a competitive athletic program is summarily downplayed. Universities rarely include athletic excellence among their many stated goals when articulating their mission, even though multi-million dollar budgets are allocated annually to promote such excellence (Thelin, 1994). Perhaps this is due to an understanding that consistent success on the athletic field places the university at risk of losing academic legitimacy. Once labeled a football factory or a sports school, regardless of the intellectual climate and merit at such an institution, the university faces a public relations problem. Conversely, universities which possess renown academic reputations find it difficult to earn respect athletically, even with consistent bowl bids and tournament invitations. Thus, the relationship between academics and athletics at institutions of higher learning within the United States has traditionally been contradictory and problematic.

This assumption that sports is anti-intellectual pervades the academic culture. It is an assumption perpetuated by administrators, faculty, the general student body, and student athletes alike. Student athletes, the active practitioners of intercollegiate sport, often internalize the stereotype of the anti-intellectual "dumb jock", frequently reproducing the negative behaviors expected of the "typical" student athlete. In turn, the student athlete identity has become a visible but misunderstood minority within the larger student population. Those student athletes most visible to the public at large are male football and basketball players, generally referred to as revenue-producing, or merely revenue athletes. While these individuals gain public acclaim for their athletic participation, they are seldom seen as serious students. Thus, these young men become invisible within the academic domain. It remains a mutually constituted invisibility, however, as these young men often distance themselves from an academic identity. Although their physical stature often warrants recognition of their presence within academic settings, these tall, muscular, and often African-American young men are seldom viewed as anything more than football or basketball players. They have come to represent the typical student athlete in folklore, popular culture, as well as within the social science research on intercollegiate athletes. This is particularly problematic and misleading since these student athletes comprise only about 15 - 20% of all student athletes on the U.C. Berkeley campus. Nonetheless, such depictions of the American student athlete have perpetuated many of the stereotypes surrounding this misunderstood

population. In contrast to revenue athletes, most female and non-revenue male student athletes, which make up the remaining 80 - 85% of this population, are often viewed in the academic setting as legitimate students. This academic legitimacy is due in part to the fact that many in the academic community are often unaware that these students are intercollegiate athletes. This lack of athletic visibility may paradoxically enhance their identity as students.

As a distinct population of college students, student athletes represent a highly diverse group of individuals, cutting across class, racial and gender divisions. Nonetheless, they all share the unique experience that they are expected to be both successful students and athletes. This sets up a potential conflict between athletics and academics and is reflected in their struggle to balance and integrate these two domains of their lives.

The struggle to integrate these two domains can best be understood in terms of social identity. Social identity refers to those aspects of an individual's self image that derive from the social categories to which one perceives him or herself belonging (Tajfel and Turner, 1986). As Ferdman (1990: 192) asserts, the notion of social identity "incorporates both the person's knowledge of membership in particular social categories and the value and feelings attached to those memberships." The more positively an individual values the social category to which he or she belongs, the stronger their social identity.

Social identities are related to social roles, which are the normative behavioral expectations of society for individuals filling a social category. In order to foster commitment to a particular role, one's identity must be invested in that role, which Snyder (1985) refers to as role identity. We will refer to it simply as identity. Placing value upon a particular social category or identity leads the individual to commit both time and energy to fulfilling the behavioral expectations of that role. The three most critical factors influencing an individual's commitment to a particular role are (i) social support, (ii) intrinsic, and (iii) extrinsic gratification.

In their longitudinal ethnographic study of an NCAA Division I basketball team, Adler and Adler (1991) employed role theory to describe the marked conflict between the academic and athletic roles of the student athlete. In describing a process they term *role domination* or *role engulfment*, and the concomitant occurrence of *role abandonment*, the authors report that over time many student athletes tend to immerse themselves almost entirely in their athletic role (role engulfment) while simultaneously detaching themselves (role abandonment) from their academic commitments. Although Adler and Adler focus solely upon revenue athletes, their ethnographic study describes the problematic relationship between athletics and academics which seems to exist for nearly all student athletes.

Student athletes are expected to be committed to both the athletic and academic roles by exhibiting behaviors and attitudes associated with these roles. The relative value placed on each identity will have a strong influence on their commitment to each role. The athletic and academic experiences at the university and the cultural meanings individuals attach to these experiences, will influence the relative strength of each identity and the level and intensity of commitment to each role.

### **The athletic identity of the student athlete**

Most intercollegiate student athletes have strong athletic identities which have been reinforced and rewarded prior to entering the university culture. Adolescents are often identified as early as late elementary or junior high school as possessing athletic talent and potential. From this time forward, the individual's commitment to athletics may be encouraged and rewarded by their primary social support system (parents, peers, coaches, teachers, etc.). Particularly within families and communities which disproportionately value athletic achievement over non-athletic accomplishments, children grow up with role models primarily found in the sports world (Edwards, 1985; Messner, 1992). Given the social status granted professional athletes within American culture, this process of rewarding athletic talent is understandable.

For young men, sport may well represent what Messner (1992) describes as a "primary masculinity-validating experience". Within the African-American community, this validation of masculinity through sport may be heightened. According to Edwards (1985), athletics is viewed by many male black youth as an important means of securing and proving one's manhood. Sport serves to validate masculinity within the African-American adolescent culture particularly because "the black male in American society has been systematically cut off from mainstream routes of masculine expression such as economic success, authority positions, etc." (Edwards, 1985: 375).

For young women, on the other hand, because sport has a history of male dominance, sports participation may raise problematic issues surrounding gender identification. Nonetheless, for both male and female athletes, athletic achievements receive a great deal of extrinsic gratification in American culture. These extrinsic rewards include ribbons and trophies, All-Star and Most Valuable Player honors, public praise and recognition, media attention, and an enhanced social status among peers. Additionally, there exists a strong incentive to commit time and energy to athletics in the present for the promise of future opportunities. Depending upon the sport, and the gender of the participant, these opportunities may include a subsidized college education, and the possibility of becoming a professional athlete. While the statistical probability of a high school or

collegiate student athlete embarking upon a professional career is negligible,<sup>1</sup> young athletes often believe their chances of becoming a professional athlete are quite likely.

In addition to the extrinsic benefits of athletic success, many individuals derive a sense of personal accomplishment or intrinsic pleasure from excelling in a competitive event. Enjoyment of the game itself, as well as the cooperation and camaraderie of belonging to a team, enhance the positive experience for many participants. Thus, the satisfaction derived from athletic competition comes from both intrinsic and extrinsic rewards. All of these forces combine to foster a strong athletic identity.

### **The academic identity of the student athlete**

Student athletes recognize the importance of a college education for economic, personal and social success in life. The desires of their parents, teachers and counselors often provide further motivation to attend college and succeed academically. For many middle and upper middle class families, there exists an inherent expectation that their children will attend college. The prestige of a college degree takes on an additional meaning for students from low income and minority families, where the aspiring student may be the first in the family to attend college. For these individuals, the family pressure to succeed academically is particularly strong. However, the financial burden of attending the university is often beyond the economic means of the family. For many of these families, an athletic scholarship comes to be seen as the only means of financing these educational aspirations. While many students are intrinsically motivated by a love of learning, these extrinsic incentives to develop an academic identity often overshadows these intrinsic incentives.

### **Barriers to the development of an academic identity**

While most student athletes attain some degree of balance between their athletic and academic identity, the level of commitment to these roles often favors one over the other. For many student athletes, particularly those highly recruited, the commitment to an athletic role becomes their primary focus. As a result, a major task for the student athlete entering the university is how best to develop a stronger academic identity and commitment to the academic role

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<sup>1</sup> As Chu(1989) points out, of 700,000 high school basketball players and 15,000 college players, 200 are drafted by the NBA. Of the 50 or so that make the team, the average playing career is 3.4 seasons. For football, only 150 out of 41,000 college football players make the pros. While African-Americans constitute only 11.7% of the U.S. population, black players comprise 55% of the National Football League, 70% of the National Basketball Association, and 20% of the professional baseball players. Edwards (1985: 376) argues that because there are only 1400 blacks participating in professional sports, sport has generally been "a treadmill to oblivion rather than an escalator to wealth and glory" for young African-Americans.



while maintaining a strong athletic identity and commitment to the athletic role. However, the major demands of participating in intercollegiate athletics often makes this task problematic.

The student athlete shares with other students problems in making the transition from high school to college. This transitional process includes adjusting to differences in the academic environment, grading practices, intellectual rigor, family support, degree of stress, and increased independence and responsibility. In order to succeed academically, all college students must overcome these barriers. However, the student athlete faces additional barriers to academic success not experienced by the general student body. These include barriers related to the time and energy demands of their sport, as well as other less tangible factors that may put athletics in conflict with academics.

Participation in intercollegiate athletics requires a substantial commitment of time and energy. While a sport is in season, student athletes generally spend between 20 and 30 hours per week attending meetings and practices, playing games at home and on the road, and in individual weight training sessions. Depending upon the sport, and the coach's expectations or requirements, the time demands during the off season can also be considerable.

Although the NCAA limits the amount of time allowed for team competition and practices in and out of season— rules developed in order to combat the conflict between the academic and athletic demands on the student athlete— players and coaches often interpret these rules quite liberally. For example, the hours devoted to weight training and other "informal" athletic meetings and practices are seldom included in these mandated time limits.

Because athletic participation is physically strenuous, there exists the problem of fatigue which makes concentration during studying more difficult. In addition to the pain and physical discomfort which may interfere with full concentration while studying or attending class, there is the extra time required for the rehabilitation of both minor and major injuries. One might expect that because the injured student athlete can no longer participate in either games or practices, extra free time is made available for study. However, in the interests of team solidarity, some coaches require injured student athletes to be present at all team meetings, practices and events, even when their injuries preclude their participation.

However, it is not solely the coach's requirements or expectations at work here. Even when the student athlete is not required to be at practices, he or she may feel compelled to demonstrate his or her commitment to the team. As the team often represents the central peer group for the student athlete, these young men and women may become depressed if they are suddenly



removed from this social network. These constraints placed upon the intercollegiate athlete further strengthen the athletic commitment.

When conflict exists between the demands of athletics and academics, it is most often decided in favor of athletics. Missing a practice or part of a practice because of an unexpected academic commitment is generally frowned upon. While a coach is prohibited under NCAA regulations from requiring a student athlete to miss an unexpected academic commitment which conflicts with practice, the coach's potential disapproval weighs heavily in the student's eyes. Because coaches possess the power to decide which athletes will play and/or start in the games, many student athletes believe, correctly or incorrectly, that they will be penalized by their coaches for choosing academic commitments over athletic ones. The athletes themselves are likewise reluctant to miss practice, as it may interfere with their athletic skill development and may place them at risk of losing a starting position.

For the many student athletes recruited to Berkeley, there exists an underlying and often justified assumption that athletic ability played a major role in their being accepted to the university. Some believe that their athletic talent is the *only* reason they have been accepted here. And in some cases, coaches reinforce this belief, telling their athletes that without their assistance, the student athlete would never have been accepted to the university. As a result, many student athletes question whether they can compete academically, feeling that they are less prepared and less qualified than the general student body.

In fact, many of these individuals are less prepared. They have earned lower high school grade point averages and SAT scores than the general student body. Their lower academic preparation may in part be due to an overemphasis on athletics at the secondary school level. Well meaning high school educators seem to reward these students' athletic skills and relax academic standards so as not to stand in the way of an athletic scholarship, which for many low income and minority athletes may appear to represent their best opportunity for a college education.

The athletic culture which student athletes inhabit informs them in subtle and not so subtle ways that athletics takes priority over academics. For many, staying minimally eligible to compete in their sport is the primary goal. Athletic eligibility requires a minimum college grade point average of 2.0 and completion of at least 24 semester units per academic year. The verbal shorthand for this mind-set is that "a C gets a degree", an expression vocalized by those student athletes most interested in remaining eligible and least committed to the academic role.

At academically elite universities such as the University of California, Berkeley, the academic reputation of the university is used as an incentive by recruiters. However, the fact

remains that recruitment of student athletes is conducted almost wholly by the coaches and representatives of the athletic department. The unspoken message that this sends to these prospective students is that athletics comes first— even at Berkeley. And while these coaches may publicly herald the intellectual pursuits of the university, their job description demands the development of a successful athletic program. Their employment relies upon their athletic success. Thus, there is a tacit understanding among these coaches (particularly in the revenue-producing sports) that keeping their athletes eligible to compete constitutes success, so long as their teams are successful. Some coaches do not see the academic development and achievement of these student athletes as their responsibility.

The motivation to succeed academically is further weakened by well publicized accounts of athletes leaving school early to launch lucrative professional careers.<sup>2</sup> For these few athletes, receiving a degree has been eliminated as a prerequisite for economic success and security. The fact that only a minuscule percentage of student athletes are able to enter the professional ranks appears to have little effect on dampening many student athlete's belief that they can and will become professional athletes. In fact, the motivation to excel at a level warranting the attention of professional scouts is believed by the coaches and most student athletes to be a necessary requisite for athletic success at the collegiate level. Many coaches and student athletes believe that once an individual relinquishes the belief that he or she can become a professional, the athlete will have lost their competitive edge. Once an athlete comes to the realization that a professional career is no longer a possibility, it is often too late to alter their commitment to the academic domain.

While Berkeley does not require the academic community to accommodate to the athletic schedules of student athletes, most professors are willing, although at times begrudgingly, to make exceptions for intercollegiate athletes. Some of these accommodations include excused absences, accepting late assignments, or even allowing exams to be administered while on road trips. At elite universities such as Berkeley, the public and private commitment to academics is strong and unequivocal. As a result of this institutional commitment, the "special treatment" afforded student athletes is often resented by the academic community. This resentment reinforces the belief by some within the academic community that intercollegiate athletics is overemphasized to the detriment of academic integrity. These young men and women are seen as mere interlopers in the academic domain. Professors may come to expect that these intercollegiate athletes are sub-par

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<sup>2</sup>This is not only a recent phenomena. As early as 1947 here at the University of California, Berkeley, Jackie Jensen left the university after his junior year to pursue a professional baseball career. Jensen returned to earn his degree after he had completed a successful professional athletic career, however.

students, reinforcing the destructive stereotype of the "dumb jock". These expectations of academic failure place a great psychological burden on many student athletes who internalize this stereotype and perpetuate a self-fulfilling prophecy.

The effect of these barriers is that many student athletes experience a conflicted collegiate career. The commitment to athletics adversely affects their commitment to academics. Rather than finding a balance in their commitment to these two domains, many student athletes strengthen their athletic commitment at the expense of their academic commitment. Lowered academic performance is often the result.

Other student athletes are able to balance the conflicting pressures and develop a strong academic identity and commitment. These students are able to transfer the attributes of a successful athlete — self discipline, hard work, perseverance, concentration — to their studies and achieve academic success. In reality, the athletic-academic relationship forms a continuum along which student athletes exist at various points.

### **Purpose of study**

The purpose of this study is to explore the effect of the athletic-academic relationship and other factors on academic performance at an academically elite Division I university.

## **Method<sup>3</sup>**

Employing cumulative Berkeley grade point average (UCGPA) as the dependent variable, a series of regression analyses were conducted to determine the effect in terms of statistical significance and variance accounted for of several cognitive, non-cognitive and background factors in predicting grade point average.

### **Subjects**

Subjects of this study were 361 out of the approximately 800 intercollegiate student athletes enrolled at the University of California, at Berkeley during the 1993-1994 academic year and participating in 21 men's and women's sports. Almost two-thirds of those surveyed were male (63.3%), while one third (36.7%) were female. 20.8% of the student athletes participated in "revenue sports", defined here as men's football and basketball, while 79.2% participated in "non-revenue" sports, defined here as all other teams excluding men's football and basketball. All of the

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<sup>3</sup> See appendix A for a complete description of the method.

revenue athletes were male. Of the non-revenue athletes, 53.5% were male while 46.5% were female. 30.5% of the subjects were freshmen, 26.3% sophomores, 26.3% juniors, and 16.8% were seniors at the time of the study. 8.4% of the sample were junior college transfers.

## **Procedures**

Two separate surveys were administered to each team. One survey focused on attitudes concerning academics while the other focused on athletics. Individual coaches were contacted and a team meeting was scheduled for the administration of these two surveys by one of the first two authors of this study. This report will deal with the academic survey only.

## **Student Athlete Academic Survey**

The Student Athlete Academic Survey (SAAS) consisted of 300 Likert scale items measuring the variables of the study. Students responded on a five point scale indicating the degree to which the statements in the survey were descriptive of them.

## **Factors and Variables**

The factors and variables are listed below. The correlation of each variable with UCGPA is in parentheses. Variables that are statistically significant predictors within each factor are in capital letters. Significant predictors, with background and academic preparation variables controlled are indicated by the apple symbol. The variance accounted for in predicting UCGPA for each factor is in squares brackets. Asterisks indicate statistical significance levels (\* $p \leq .05$  ; \*\* $p \leq .01$ ).

### **Background Factors**

#### **Demographic Status [13.2%]**

- GENDER ( $r = .25^{**}$ )
- ETHNICITY ( $r = -.19^{**}$ )  
AFRICAN-AMERICAN/ Caucasian plus Other
- SOCIAL STATUS ( $r = .23^{**}$ )  
Mother's education

#### **Athletic Status [14.9%]**

- REVENUE SPORT STATUS ( $r = -.26^{**}$ )  
Revenue sports = football and men's basketball. Non-revenue = All other sports
- DEGREE OF RECRUITMENT ( $r = -.31^{**}$ )
- Scholarship Status ( $r = -.24^{**}$ )

Full, partial or no scholarship

- Sport  
22 Men's and Women's Varsity sports
- Year  
Freshman, Sophomore, Junior, Senior, and Junior College Transfer

### **Cognitive Factors**

#### **Academic Preparation [40.8%]**

- SAT VERBAL ( $r = .62^{**}$ )
- SAT MATH ( $r = .48^{**}$ )
- HIGH SCHOOL GRADE POINT AVERAGE ( $r = .46^{**}$ )

#### **Studying [13.6%]**

- METACOGNITIVE STUDY STRATEGIES ( $r = .29^{**}$ )  
Comprehension monitoring, determining task difficulty, main idea comprehension, memory strategies, employing background knowledge, and self questioning
- READING AND STUDY PROBLEMS ( $r = -.30^{**}$ )

### **Non-Cognitive Factors**

#### **Achievement Motivation [39.8%]**

- ACADEMIC SELF WORTH ( $r = .55^{**}$ )  
Confidence in one's ability to compete academically
- SELF-HANDICAPPING EXCUSES ( $r = -.36^{**}$ )  
Excuses or rationalizations for academic failures to protect self-worth
- INTRINSIC MOTIVATION ( $r = .30^{**}$ )  
Propensity to approach a task for its inherent challenge and interest
- Extrinsic Motivation ( $r = .18^{**}$ )  
Propensity to approach a task to gain external rewards
- Academic Success Orientation ( $r = .39^{**}$ )  
Motivation to approach success
- Academic Failure Avoidance Orientation ( $r = -.07$ )  
Motivation to avoid failure

#### **Athletic-Academic Relationship [30.3%]**

- ATHLETIC-ACADEMIC COMMITMENT ( $r = -.50^{**}$ )  
Relative degree of commitment to athletics and academics
- EXPLOITATION ( $r = -.42^{**}$ )  
Degree student athletes believe they are exploited by the university for their athletic participation

## **Results<sup>4</sup>**

### **Correlations with UCGPA**

All variables, with the exception of Academic Failure Avoidance Orientation, had statistically significant correlations with UCGPA.

### **Background Factors**

#### **Demographic Status**

- All three demographic variables— gender, social status and ethnicity— were statistically significant predictors of UCGPA, accounting for 13.2% of the variance.

#### **Gender**

- Female student athletes ( $M = 3.01$ ) had higher UCGPAs than male student athletes ( $M = 2.76$ ).
- Female student athletes achieved higher SAT Verbal and HSGPAs, but not SAT Math scores, than their male counterparts. The advantage in UCGPA remains when these academic preparation variables are controlled.
- The academic advantage which females have over males cannot be fully explained by their superior academic preparation upon entering the university.
- Female student athletes had a stronger commitment to the academic role than males and a weaker commitment to athletics.

#### **Ethnicity**

- African-American student athletes had lower SAT Math and SAT Verbal, but not HSGPAs, than non African-American student athletes.
- African-American student athletes were of lower social status than Caucasian but not Other (Asian-American /Chicano/Latino/ Pacific Islanders etc.) student athletes.
- African-American student athletes ( $M = 2.57$ ) had lower UCGPAs than Caucasian student athletes ( $M = 2.88$ ) and Other (Asian-American /Chicano/Latino/ Pacific Islanders etc.)

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<sup>4</sup> See appendix B for a complete description of the results.

student athletes ( $M = 2.94$ ). However, the differences between African-Americans and the other two groups disappears when looking at revenue sports only.

- African-American student athletes believed they were more exploited by the university and expressed greater optimism in the possibility of a professional career than non African-American athletes. However, these differences also disappear when looking at revenue athletes only.
- The differences between African-American and non African-American student athletes in this sample may be more a function of revenue status than ethnicity.

### **Social Status**

- Higher social status student athletes had higher UCGPAs than lower social status student athletes.
- There were no statistically significant gender or ethnicity differences in social status.

### **Year**

- There were few consistent developmental trends in the data.

### **Athletic status**

- Two of the three athletic status variables — revenue status and degree of recruitment — were statistically significant negative predictors of UCGPA. Scholarship status was not a statistically significant predictor. All three variables accounted for 14.9% of the variance.

### **Degree of Recruitment**

- The more student athletes reported that they were recruited, the lower their UCGPAs.
- When academic preparation, social status, and ethnicity were controlled, degree of recruitment failed to be a statistically significant independent predictor of UCGPA.

### **Scholarship Status**

- Non-scholarship student athletes ( $M = 2.98$ ) had higher UCGPAs than partial ( $M = 2.68$ ) and full scholarship ( $M = 2.73$ ) student athletes.



- In the regression analysis of the athletic status variables, scholarship was not a statistically significant predictor of UCGPA.

### **Revenue status**

- Revenue student athletes (football and men's basketball) had lower UCGPAs ( $M = 2.6$ ) than non-revenue student athletes ( $M = 2.9$ ).
- Revenue student athletes were of lower social status and had lower academic preparation than non-revenue student athletes.
- When academic preparation, social status, and ethnicity were controlled, revenue status remained a statistically significant independent predictor of UCGPA. Differences in academic preparation and background characteristics do not fully explain the statistically significant relationship of revenue status to UCGPA.
- Revenue student athletes were more committed to the athletic role than non-revenue student athletes.
- Revenue student athletes believed they were exploited more than non-revenue student athletes.
- Revenue student athletes reported greater self-handicapping excuses for poor academic performance than non-revenue student athletes.
- More revenue athletes (50%) believed they have the ability to become professional athletes than non-revenue athletes (27.9%).

## **Cognitive Factors**

### **Academic Preparation**

- All three academic preparation variables — SAT Verbal, SAT Math and HSGPA — were statistically significant positive predictors of UCGPA, accounting for 40.8% of the variance.

- Student athletes with higher SAT Verbal, SAT Math scores and higher HSGPAs had higher UCGPAs than students with lower SAT Verbal, SAT Math scores and lower HSGPAs.
- When the demographic and athletic status variables were controlled, all three academic preparation variables remained statistically significant and were independent predictors of UCGPA. Differences in demographic and athletic status do not fully explain the relationship of the academic preparation variables to UCGPA.

## **Study**

- Both study variables — reading and study problems and metacognitive study strategies — were statistically significant predictors of UCGPA, accounting for 13.6% of the variance.
- Student athletes with better metacognitive study strategies and fewer reading and study problems had higher UCGPAs than students with poorer metacognitive study strategies and more reading and study problems.
- When the statistically significant demographic, athletic status and academic preparation variables were controlled, both reading and study problems and metacognitive study skills failed to be statistically significant independent predictors of UCGPA.

## **Non-Cognitive Factors**

### **Achievement Motivation**

- The achievement motivation variables — academic self-worth, self-handicapping excuses, academic failure avoidance orientation and intrinsic motivation — were all statistically significant predictors of UCGPA, accounting for 43.6% of the variance. Academic success orientation and extrinsic motivation were not statistically significant predictors.
- Student athletes with higher UCGPAs had greater academic self-worth, were less prone to using self-handicapping excuses for academic failures, were less motivated to avoid failure, and were more intrinsically motivated than students with lower UCGPAs.
- When the statistically significant demographic, athletic status and academic preparation variables were controlled, only academic self-worth and self-handicapping excuses remained statistically significant predictors, thus making independent contributions to

predicting UCGPA. Differences in demographic status, athletic status and academic preparation do not fully explain the relationship of academic self-worth and self-handicapping excuses to UCGPA.

- Academic self-worth was negatively correlated with athletic-academic commitment ( $r = -.45^{**}$ ). The lower student athletes' academic self-worth, the more they were committed to athletics and the less to academics.

### **Athletic Academic Relationship**

- Both athletic-academic relationship variables — athletic-academic commitment and exploitation — were statistically significant negative predictors of UCGPA, accounting for 30.3% of the variance.
- Student athletes with a stronger commitment to athletics than to academics had lower UCGPAs than student athletes with a stronger commitment to academics than athletics.
- The more student athletes believe they are exploited by the university, the lower their UCGPAs.
- Revenue athletes were more committed to athletics and had stronger beliefs that they were being exploited than non-revenue athletes.
- When the statistically significant demographic, athletic status and academic preparation variables were controlled, athletic-academic commitment and exploitation remained statistically significant predictors, thus making independent contributions to predicting UCGPA. Differences in academic preparation, athletic status and demographic characteristics did not account for the statistically significant relationship of athletic-academic commitment and exploitation to UCGPA.
- Athletic-academic commitment had moderate to high correlations with SAT Verbal ( $r = -.38^{**}$ ), SAT Math ( $r = -.30^{**}$ ), HSGPA ( $r = -.37^{**}$ ), study problems ( $r = .33^{**}$ ), degree of recruitment ( $r = .33^{**}$ ), academic self-worth ( $r = -.37^{**}$ ), academic success orientation ( $r = -.40^{**}$ ), intrinsic motivation ( $r = -.36^{**}$ ), self-handicapping excuses ( $r = .43^{**}$ ), and exploitation ( $r = .40^{**}$ ).

### **Factors Compared**

- A comparison of the variance accounted for by the cognitive, non-cognitive and background variables grouped separately showed that the non-cognitive factors (44.6%)

accounted for slightly more variance than the cognitive factors (42.4%). Background factors accounted for considerably less variance (19.3%).

### **All Variables Compared**

- When all of the statistically significant predictor variables were entered into a single regression analysis, only SAT Verbal, SAT Math, academic self-worth, athletic-academic commitment and exploitation were statistically significant predictors of academic performance at Berkeley. Gender, reading and study problems and self-handicapping excuses approached significance.

## **Discussion**

The following discussion explores the factors and underlying mechanisms which influence academic performance. Recommendations for improving the academic performance of student athletes here at the University of California, Berkeley are made.

### **Gender**

Female student athletes were academically superior to their male counterparts. This was coupled with a weaker commitment to athletics.

There are several reasons why females might develop stronger academic identities and weaker athletic identities than male student athletes. The most important reason is that there are fewer external rewards, in terms of social prestige and remuneration for females in the world of sport. Media coverage continues to favor male over female athletics (Lopiano, 1993; Messner, 1992). The content of this exposure is similarly telling, as women continue to be cast more often as objects of male desire rather than as athletically powerful women (Gottesman, 1994).

This trend seems to be slowly changing, however, as evidenced during the most recent Olympic Games in Atlanta, described as the Games of the Woman. The implementation of Title IX legislation has resulted in more resources for women's sports, and as we approach the twenty-first century, there are also new opportunities for professional careers in several women's sports. It remains to be seen whether these positive changes will create the unintended negative consequences of lowering the academic performance of females as they become more committed to athletics at the expense of academics.

Nonetheless, the probability of becoming a professional athlete is even more remote for women than for men. Additionally, the financial reward for a career in women's professional

sports still lags far behind the astronomical salaries paid to many male professionals. For many women, therefore, sport may be seen primarily as a means of accessing and enriching their college education rather than serving as a stepping stone to an athletic career. This same paradigm holds true for many non-revenue male student athletes who perform better academically than revenue athletes. These non-revenue male and female student athletes remain focused on academics as they see their studies, rather than their sport, most directly influencing their future careers.

A second reason for the superior performance of females relates to one of the functions of sports in society. Despite the successes made by female athletes in our culture, sport continues to be revered as a male domain and a "primary masculinity validating experience" (Dubbert, 1979; Messner, 1987). Boys are often attracted and pushed toward athletic participation as a means of fostering a socially sanctioned masculine identity. Boys who do not engage in sport, or demonstrate limited proficiency within this achievement arena, risk having their masculinity questioned. These boys may even be labeled "sissies" (from sister), derogatorily implying that they are effeminate.

For girls, the entry into athletics can be problematic, as this foray into sport may conflict with their sex role identification. Those girls who demonstrate a proficiency in athletics are often type-cast as "tomboys", highlighting the apparent incompatibility between an athletic and female identity. While a "tomboy" has come to be more socially acceptable than a "sissy," teenage, and adult women are forced to defend against social stereotypes which connect female athletics with homosexuality. While these homophobic stereotypes may merely serve as a weapon of sexism (Pharr, 1993), a male means of retaining control of the sports realm, many women disidentify with sport because of these assumed connections.

Just as sport is seen as a masculine preserve, academics is seen as a feminine domain (Bourdieu, 1978). From this gendered perspective, it may help to explain the differences found between male and female student athletes in their approach toward academics. As females identify more fully with academic pursuits and more problematically with sport, their academic performance outdistances males who do not face this stereotypes and enjoy greater external rewards.

### **Ethnicity**

The finding of poorer academic performance for African-American student athletes is not surprising given the lower academic performance of African-Americans in general (Steele, 1992). However, as shown in the results, the difference between African-American and non African-Americans in UCGPA disappears for revenue athletes. Thus, it appears that the differences in

academic performance between African-Americans and non African-Americans may be in large part due to the fact that the African-American student athletes are predominantly found in the revenue producing sports.

Although the literature has been compelling in terms of the social stigma experienced by African-Americans within the American education system (Rist, 1970; Covington and Beery, 1976; Covington, 1992 ), as well as the resultant disidentification from this achievement arena (Ogbu, 1990; Steele, 1992), the academic disidentification of African-American student athletes in our sample appears to be more a reflection of their athletic identity as revenue athletes than their ethnic membership. This issue, however, warrants further investigation.

### **Social Status**

The finding that the higher the student athlete's social status the higher the student athlete's UCGPA is consistent with many other studies of students in general which show a relation between social status and academic performance. However, social status played a relatively small role when compared to the other variables in this study.

### **Revenue Status**

The poorer academic performance of revenue athletes, when compared to non-revenue athletes, cannot be explained solely by lower social status or lower academic preparation. This suggests that there are other factors at work beyond the initial disadvantage of poorer academic preparation which influences academic performance and identification. The revenue athlete's strong athletic identity and relatively weaker academic identity plays an important role.

It appears that a substantial portion of revenue student athletes enter the university for mainly athletic reasons. They are usually very successful and highly visible elite high school athletes with a very strong athletic commitment which has been developed at the expense of their academic commitment and skills. As previously discussed, this commitment to an athletic role is reinforced during the recruiting process, when competitive intercollegiate athletics is represented to the student athlete as the primary mission of the university. Their relatively weaker academic preparation, and the impending academic challenges in college, may be glossed over in an effort to entice these athletes to attend Berkeley.

When the revenue athlete gains notoriety and heightened social status on account of his athletic talent, he will likely wish to retain this star status. As athletic accomplishments generally receive higher prestige than academic successes among the student body, student athletes may well emphasize the identity most socially rewarded. These individuals may therefore want to be seen as

athletes, emphasizing in their dress and demeanor what an intercollegiate athlete is thought to represent. While their athletic prowess may be accentuated, their academic image is proportionately lowered in the minds of the faculty and fellow students.

Being seen as an athlete on a college campus carries with it an anti-academic stigma as the dumb jock stereotype attests. The stigma may be even greater at an academically elite university such as Berkeley. This widespread stereotype assumes that brain and brawn cannot be embodied within the same individual. If one has developed their body to perform exceptional athletic feats, their intelligence must somehow be wanting. Those student athletes who are immediately recognizable as athletes are assumed to be inferior students. This is especially true of revenue athletes who often cannot disguise their physical stature which identifies them as an athlete. Unfortunately, many of these individuals internalize this social stereotype and exhibit the associated behaviors. This internalization may actually lead otherwise promising students to de-emphasize their academic abilities and interests and employ self-handicapping excuses to cover up their lack of effort. The belief they were being exploited, provides them with another excuse for less effort and the resultant poor performance.

The promise of a professional career is another factor which leads many revenue athletes to de-emphasize their academic involvement in order to focus the bulk of their energy on this singular goal. While the prospects of becoming a professional athlete remain greater in the revenue-producing sports than in the non-revenue sports, the actual probability of these intercollegiate athletes turning professional is remote. Nonetheless, a full 50% of the revenue athletes in our sample reported a belief in their ability to become a professional athlete.

### **Academic Preparation**

Academic preparation was the second strongest independent predictor of academic performance at Berkeley. Academic preparation is reflected in reading and study problems and metacognitive study strategies. Although these cognitive factors demonstrate a powerful influence on academic performance, the two non-cognitive factors — achievement motivation, and athletic-academic relationships — play a very important role as well, and may in fact mediate the relationship between academic preparation and academic performance at Berkeley. The relative emphasis and commitment to athletics and academics in secondary school affects academic preparation and study skills. When relative athletic academic commitment is continued at the university, academic performance mirrors academic preparation, accounting for the strong relationship of academic preparation to UCGPA.



## **Study**

The two study variables were statistically significant but not independent predictors of academic performance. While most students can benefit from improved studying, it is almost a necessity for student athletes. The time demands of athletics require that student athletes learn to manage their time effectively. Since this study time will inevitably be limited, it is also important that this time be used efficiently by the employment of effective study strategies such as previewing, annotating, predicting exam questions etc. These strategies make studying more efficient as well improving understanding of the course content. Provided that the academic commitment is present, improvement in time management and study strategies can produce stronger academic performance.

## **Achievement Motivation**

The achievement motivation variables — academic self-worth and self-handicapping excuses — were statistically significant independent predictors of academic performance. The strong predictive value of one's academic self-worth for academic success at the University of California suggests that student athletes who question their ability to compete academically at Berkeley will in fact have trouble competing. Berkeley's extremely competitive student body, in which 4.0 HSGPAs are the rule rather than the exception, means that the majority of student athletes will inevitably have lower academic preparation than their non-athlete peers. Less than a quarter would be accepted to Berkeley if they were not athletes. Student athletes with lower grade point averages than their non-athlete peers may justifiably fear that they are less qualified and academically capable than other entering students. Being accepted to the university purportedly because of athletic rather than academic merit only adds to this fear. This fear becomes a self-fulfilling prophecy for many student athletes who reduce academic effort and employ self-handicapping excuses to explain their poor performance rather than putting in the extra effort required to succeed. Academic self-worth was also negatively correlated with athletic-academic commitment ( $r = -.45^{**}$ ), suggesting that self doubt about academic ability can lead to an over emphasis on athletics at the expense of academics.

The strong predictive value of academic self-worth and self-handicapping excuses is consistent with self-worth theory, as articulated by Covington (1992). Self-worth plays a central role in achievement motivation, as it is typically equated with one's perceived ability to achieve competitively. From this self-worth perspective, academic performance comes to be seen mainly as a reflection of one's fixed intrinsic ability. In order to protect themselves from the conclusion that their poor academic performance indicates that they are not intelligent, student athletes shift

their efforts into athletics and cover up their lack of academic effort with self-handicapping excuses.

It might be argued that since students know their SAT scores, HSGPAs and UCGPA, the correlation with academic self-worth is simply a reflection of that knowledge. One's academic self-worth is strongly influenced by past and current academic performance. However, it is not simply a reflection of their actual performance since academic self-worth continued to predict academic performance when academic preparation was controlled. The feeling of academic self confidence is also influenced by the history and dynamics of one's motivational orientation and academic and athletic identities.

### **Exploitation**

There are at least two explanations for the statistically significant relationship of feelings of exploitation to academic performance. As many of these intercollegiate athletes come to realize that their prospects of turning professional are slim, some student athletes may begin to resent the university for what they believe to be an exploitation of their athletic talents. This resentment may lead directly to lower academic performance through a reduction in effort and motivation to achieve. The student athlete may develop a conscious or unconscious resistance and even rejection of the academic demands of the university. This rejection of the academic game may be rationalized for some as an expression of non-conformity. As these student athletes do not feel fully appreciated for their contribution to the university, they question why they must submit to the academic requirements of a collegiate education. In response, many of these student athletes expend the minimal effort academically in order to merely remain athletically eligible.

A second explanation which appears to be more prevalent suggests that exploitation provides an excuse or rationalization for lowered academic performance. Exploitation provides a way of justifying and excusing the diminution of academic effort. When the combination of poor academic preparation and a greater commitment to athletics leads to poor academic performance, the student athlete may then blame the mandated athletic demands for his or her poor performance rather than his or her own lack of academic effort. Feelings of resentment emerge, when student athletes believe that the university is using their athletic ability without providing the academic support necessary for them to become successful students.

These feelings of exploitation were much higher for revenue athletes than for non-revenue athletes. Revenue athletes assume their sport brings in revenue and prestige to the university for which they receive little monetary compensation beyond a scholarship. Although the program

often runs a deficit, this erroneous belief in budget surpluses from their sport exacerbates their belief that they are being exploited.

### **Athletic-Academic Commitment**

The strong and independent predictive value of the athletic-academic commitment variable and its strong relationship to academic preparation and achievement motivation variables underscores perhaps the central problem facing student athletes at an academically elite university such as Berkeley. This problem involves the delicate balance between academic and athletic demands which are often in conflict. Since most student athletes come to Berkeley with a strong athletic identity, the primary task facing most student athletes is figuring out how best to develop or strengthen an academic identity while simultaneously maintaining their strong athletic commitment. This balancing act, requiring conscious and persistent effort, is no easy task.

Upon entering the university, all student athletes face a quantum leap in the athletic demands placed upon them. As one female basketball player put it, "In high school my sport was fun, now it's work". The academic expectations are likewise much more challenging, requiring a concerted effort just to maintain the minimum academic eligibility. The time and energy obligations of their sport requires them to learn to manage their time more effectively and to study more efficiently. Thus, all student athletes, even those with strong academic skills and a developed academic identity, must respond to the increased demands by making a stronger commitment to academics.

Academically successful student athletes appear to be able to respond to the increased demands and transfer the qualities of hard work, discipline, and perseverance — traits necessary for successful athletic performance — to their academic lives. For these students, who are more likely to be female and non-revenue athletes, academics and athletics complement and reinforce one another. For example, some student athletes do better when their sport is in season and report that the time and energy demands of athletics provides the necessary incentive to become more focused and efficient students. Our research suggests that a well developed academic identity, which is reflected in confidence in one's academic ability, plays a critical role in academic success. A stable belief in the ability to compete academically at Berkeley and a strong academic identity fuels strong motivation to attain academic excellence. Success breeds success just as failure breeds failure.

Academically marginal student athletes, who are more likely to be male and in the revenue sports, respond differently to the increased demands. These student athletes fail to make the connection between the qualities necessary for athletic success and those necessary for academic success. They have weak academic identities and strong athletic identities due in part to a history

of excessive emphasis on athletics at the expense of academic effort, which often results in poor academic preparation and study strategies, less academic self confidence, and less academic achievement motivation. They are unwilling and/or unable to make the necessary extra commitment to academics. Rather than working harder to meet the increased demands and compensate for their academic deficiencies, they passively allow the athletic role to engulf them. This athletic engulfment reduces the motivation to achieve success within the academic sphere (Adler & Adler, 1991). The primary academic goal becomes merely staying eligible to compete athletically. Earning the minimum number of units and the requisite 2.0 grade point average becomes a short-term panacea for the next season's competition. The lack of academic effort is disguised by adopting self-handicapping excuses for poor performance. The belief that they are being exploited by the university for their athletic ability provides another justification for poor performance. The lack of commitment to academics eventually results in the student athlete's failure to develop an academic identity and acquire the knowledge, skills, and intellectual interest to be anything more than a marginal student. The resultant lack of confidence in their ability to compete academically at Berkeley becomes a self-fulfilling prophecy and robs these individuals of an enriching college experience.

The finding that achievement motivation and the relative strength of the athletic and academic identities account for a substantial portion of the variance in UCGPA strongly suggests that non-cognitive factors play a critical role in these students' academic performance. It is not academic preparation and skills alone which determine students' academic successes and failures. Thus, attempts to improve the academic performance of student athletes should not only focus on academic skills. Rather, as educators, we need to encourage these young men and women to feel an integral part of the academic community and thus identify more fully with academic pursuits.

## Recommendations

The development of a strong academic identity and commitment is strongly influenced by the student athlete's experiences at Berkeley. The student athlete's classes, advising, coaches and peers play an important role in this process.

The Athletic Department at Berkeley has demonstrated a strong and unequivocal commitment to academics through its financial support of the Athletic Programs for Student-Athletes (formerly called the Athletic Study Center) and the Education 75 class (see below) as well as the public and private statements of the athletic department administrators. However, we are convinced that the Athletic Department, with the assistance of the campus community, can do more to help student athletes strengthen their academic identities by showing them in word and action that academic and athletic success are not incompatible, but can in fact reinforce one another.

Because of the cumulative effects of the lack of academic commitment on academic motivation and performance, it is critical to intervene as early as possible in the developmental process of academic and athletic identification. The student athlete's early encounters and first year experiences within the university has a strong influence on his or her developing balance between an academic and athletic identity.

### • Place more emphasis on academics during the recruiting process.

In general, the student athlete's first contact with the university is with coaches representing the Athletic Department. Naturally, intercollegiate athletics will be the main focus of attention. However, during the recruiting process and after the student athlete has committed to attend Berkeley, more needs to be done to help incoming student athletes learn about the academic life on campus so that they can begin to perceive themselves as both student and athlete. It does the recruited student athlete a tremendous disservice to downplay academic expectations. These recruited athletes should be exposed to individuals both knowledgeable and passionate about the intellectual climate available at U.C. Berkeley. There needs to be a concerted effort made by academic and athletic representatives of the university to provide a balanced picture to these young men and women. These efforts need to be built upon by more *systematic* involvement of faculty and other academic support staff to make clear to student athletes that they show academic, and not merely athletic, promise.

- **Provide student athletes with the study and time management skills necessary to succeed at Berkeley.**

Because of the formidable demands of athletics and many of these individual's lower academic preparation, it is crucial that student athletes learn to study and manage their time more efficiently. Some of these skills are covered in Education 75. In addition, students should be strongly encouraged to take course work offered through the Student Learning Center and Department of Education which will help them improve their study skills. It is important for student athletes to develop these skills early in their Berkeley careers in order to keep them from becoming overwhelmed by the academic demands of the university.

- **Help student athletes become more a part of the university community.**

Another consequence of intercollegiate athletic participation is that student athletes often feel separate from other students on campus. As a result, they may not take advantage of the university resources such as libraries, computer facilities, lectures on campus, clubs, career services, etc. These missed opportunities adversely affect the development of an academic identity.

Because student athletes devote substantial amounts of time and energy to their sport, their primary social group tends to be comprised of teammates and other student athletes. There is little incentive or time to mix with the rest of the student body and to benefit from their diverse academic interests. This adds to their isolation from the campus community and the feelings of not belonging. The athletic department needs to take active steps to help student athletes participate more fully in campus life. The freshman living arrangement provides one area where changes could be made. Student athletes should be more fully integrated with the regular student body and have roommates who are not necessarily student athletes. We realize that this can create logistic problems in terms of proximity to practice facilities, team meals, etc.; however, some creative solutions and some inconvenience would be worth the effort in helping student athletes feel a more vital part of campus life.

- **Continue to support courses to help student athletes understand their dual roles.**

We have developed a course entitled Education 75: *Introduction to Sport and Higher Education*, with the full support of the Athletic Department. Within this academically rigorous course, freshman student athletes study the socio-cultural and historical context of sport in higher education, as well as their own experiences within this context. Understanding their own experiences within this wider context helps them to integrate the dual identities of collegiate student



and athlete. The Athletic department needs to continue to support this course and encourage all freshman athletes to take it.

- **Develop screening survey to identify academically at risk student athletes.**

The results of this study suggests that some of the analyzed factors and variables are predictive of academic success and failure. A subset of the items employed in this study, along with information on students' academic preparation, could be employed as a screening instrument to be administered to incoming freshman and Junior College transfer athletes to assist in identifying those who are likely to have academic difficulties. More attention and intensive help could be provided for these students in order to help them develop stronger academic identities. The Athletic Programs for Student-Athletes currently conducts this screening on an informal basis. The proposed screening instrument could supplement the current screening procedures and make the process more systematic.

### **Coaches**

Athletic coaches play a central role in the lives of student athletes. They spend more time with the student athletes than any other adult on campus. Coaches' attitudes and behavior toward academics sends a strong message to student athletes. Since the strength of Berkeley's academic reputation is often a strong selling point in recruiting, the athletic department and coaches have an ethical obligation to make sure that athletic commitments do not interfere with the student athlete's ability to acquire a solid education. The subtle and sometimes not so subtle pressures that student athletes feel to make athletics their first priority needs to be openly discussed and dealt with. With a little creativity and a stronger commitment, the promise of a Berkeley education can be made a reality for all student athletes who desire it.

- **Coaches need to give academics a higher priority.**

While a coach's first priority is most often athletics, academics must have a high priority as well. It is inappropriate for coaches to tell student athletes that athletics should be their first priority. Coaches need to understand and make sure that their athletes understand that academics should have a high priority as well. Providing time to study is one way to demonstrate to students that academics should receive a high priority. We are aware that coaches covet the time they have with their student athletes and need to have this time focused on athletics; however, there is time during road trips and other down time when student athletes could be encouraged to study. If



coaches make academics one of their priorities, student athletes will have a better chance of striking the delicate balance between athletics and academics.

- **Coaches need to develop a greater understanding of the academic demands at Berkeley.**

Since a number of coaches at Berkeley were not students at academically elite universities, they may not, based on their personal experiences, have a full understanding of the nature and amount of academic demands placed upon their athletes. They need to be made more aware of these demands. Coaches could attend an occasional class in which their athletes are enrolled, look over their student athletes' notebooks, syllabi and course requirements, etc. If coaches were more aware of these academic demands, they might be more sensitive to their athletes' academic pressures. The Athletic Programs for Student-Athletes is involved in some of these activities for selected sports and coaches. These efforts need to be expanded. There also needs to be more interchange between the coaches and faculty to share their experiences and expectations of one another. A coach-faculty night, similar the student athlete-faculty night, should be developed. It could help both faculty and coaches become more aware of each other's expectations and responsibilities.

- **Coaches need to see themselves as part of the academic community.**

Currently most coaches see themselves as separate from the intellectual life of the university. Coaches should be encouraged as time allows to participate in this academic life. They should be encouraged to occasionally sit in on classes, attend lectures etc.. Faculty could be invited to talk to coaches about their research. Coaches could be invited to talk to classes about their areas of expertise. Many coaches would welcome these opportunities if it was made clear to them that the athletic department supports these activities.

- **Coaches need to model the academic role by their own behavior.**

Coaches are often role models for their student athletes. If student athletes see their coaches engage in intellectual activities such as reading books and newspapers, going to bookstores, going to talks on campus, attending classes, etc., it will send the message that athletic and academic pursuits need not conflict.

- **Enlist the team concept in support of academics: adjusted target team GPAs.**

Athletes feel a strong sense of obligation to their teammates. Team solidarity and each member's individual contribution to the team is valued in most sports. There is peer pressure on individual student athletes to do their share in making the team successful. We believe that the team solidarity idea could be applied to the academic performance of the team. We propose that a adjusted target team GPA be made part of each team's goals. Each team would be assigned an adjusted target GPA. The adjusted target team GPA would be set by basing it on the academic performance of previous teams and the academic preparation of the current team members. Teams would be recognized and rewarded for meeting or exceeding their target, rather than rewarded solely for earning the highest GPA among all teams.

There are several advantages to this proposal. First, it would enlist team solidarity and an obligation to fellow teammates in the service of academic goals. Second, the adjusted team target GPA levels the playing field by allowing teams to compete against their own target GPA rather than against other teams, thus providing greater academic incentive. For example, the football team could be successful and be rewarded without having to equal the GPA of the cross country or gymnastics team. Third, this system rewards effort and improvement while de-emphasizing a fixed criteria of ability. The current system of recognizing outstanding individual academic performance, while commendable, does not necessarily provide role models for other members of the team. If these individuals are seen as exceptionally bright or not top notch athletes, they do not provide much academic incentive for other team members who may already question their own ability to compete academically at Berkeley. Under the proposed system, student athletes could work hard and contribute to a team's academic goal without being required to produce exceptional academic performance.

On a more national scope, however, the campus community should strongly promote our student athletes who receive academic awards such as Academic All Americans. The University of California, at Berkeley should strive to lead the nation in balancing competitive academics and athletics.

### **Athletic Department**

The Athletic Department has an important role to play in making clear its commitment to academics. In addition to the laudable activities mentioned above, the athletic department needs to work with coaches to place a stronger emphasis on academics.

- **Provide incentives and rewards for coaches to emphasize academics.**

Coaches, like any of us, respond to incentives and rewards. We recommend that the coaches be rewarded for engaging in some of the activities discussed above. For example, coaches could be rewarded if their team meets or exceeds the targeted GPA.

- **Provide opportunities for coaches and athletic administrators to discuss and share ideas about improving academics.**

In order to bring about changes in attitude and behavior, it is necessary to enlist the support of those being asked to change. The athletic department should provide forums for coaches, student athletes, and athletic administrators to discuss improving the balance between academics and athletics. Such dialogue must take into account the diverse voices of the student athlete population.

### **University Administration**

The university administration has an obligation to play a stronger role here as well.

- **Educate the campus community about the role of student athletes on the Berkeley campus.**

The commitment to athletic and academic excellence under the very visible leadership of former Chancellor Tien has sent a strong message to the campus community that student athletes have a place at Berkeley. However, there are those in the campus community, especially faculty members, who question whether student athletes indeed belong here. These beliefs are based on stereotypes which unfairly generalize about a highly diverse student athlete population. To some, student athletes come to be regarded as nothing more than illegitimate students or "dumb jocks". There is a need to provide the campus community with more accurate information about student athletes to debunk these myths and stereotypes. Student athletes, in turn, must be encouraged to take responsibility for their actions and not adopt behaviors which reinforce and perpetuate these negative stereotypes.

We propose that the campus administration prepare a document to be distributed to the campus community providing some facts about student athletes at Berkeley, highlighting their academic qualifications, performance, graduation rates and correcting the stereotypes which currently exists. More importantly, this document should include the rationale and justification for

the existence of intercollegiate sports on campus, celebrating the contributions which intercollegiate athletics and the student athletes themselves make to university life.

**Establish a Chancellor's Committee on Student Athletes.**

Efforts to improve the academic performance of student athletes should be an ongoing process which will require the cooperation of all segments of the university. We propose that the Chancellor appoint a standing committee whose sole purpose would be to monitor and work to improve the academic performance of student athletes. The committee would work with the athletic department and the faculty to suggest and help implement changes designed to help foster the academic identity of student athletes. It should also work to foster more cooperation and mutual understanding between the athletic department and the faculty. The committee should consist of faculty members, current and former student athletes, representatives from the Athletic Department, the Athletic Programs for Student-Athletes, the University Administration, the NCAA faculty representative, and other concerned groups. One responsibility of the committee would be the development of the document described above.

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**Appendix A**  
**Complete Description of Method**



## **Method**

### **Subjects**

Subjects of this study were 361 out of the approximately 800 intercollegiate student athletes enrolled at the University of California, at Berkeley during the 1993-1994 academic year. Almost two-thirds of those surveyed were male (63.3%), while more than one third (36.7%) were female. The male student athletes participated in eleven sports, inclusive of football, basketball, baseball, track and field, cross country, soccer, swimming, water polo, tennis, gymnastics, and golf. The female student athletes participated in eleven sports, inclusive of basketball, softball, track and field, volleyball, cross country, soccer, swimming, tennis, crew, gymnastics and field hockey. 20.8% of the student athletes participated in "revenue sports", defined here as men's football and basketball, while 79.2% participated in "non-revenue" sports, defined here as all other teams excluding men's football and basketball. All of the revenue athletes were male. Of the non-revenue athletes, 53.5% were male while 46.5% were female. 30.5% of the subjects were freshmen, 26.3% sophomores, 26.3% juniors, and 16.8% were seniors at the time of the study. 8.4% of the sample were junior college transfers.

### **Procedures**

Two separate surveys were administered to each team. One survey focused on attitudes concerning academics, while the other focused on attitudes toward athletics. Individual coaches were contacted and a team meeting was scheduled for the administration of these two surveys by one of the first two authors of this study. It was emphasized that these meetings should not interfere with either the team's regular training or the individual team members' academic schedules. In several cases, the student athletes surveyed completed both surveys in one sitting, while other teams completed the surveys in two separate sittings. This report will deal with the academic survey only.

### **Student Athlete Academic Survey**

The Student Athlete Academic Survey (SAAS) consisted of 300 Likert scale items which measure background, as well as the cognitive and non-cognitive factors affecting the dual achievement domains of intercollegiate academics and athletics. Background factors included demographic and athletic status. The cognitive factors included academic preparation, study strategies and study problems. The non-cognitive factors included achievement motivation and the academic-athletic relationship. These factors, and the scales which comprise them are described below: the capitalized name in brackets is the label used in the tables. Subjects were asked to rate

the items on a five point Likert scale in which 1 indicated "not very true of me" and 5 corresponded to "very true of me".

## **Background Factors**

### **Demographic Status**

#### **Student athlete gender [GENDER]**

#### **Student athlete ethnicity [ETHNICITY]**

Subjects designated their ethnic background from a set of the following choices: (a) African-American; (b) Mexican-American/Chicano; (c) Other Spanish-American/Latino; (d) American Indian/Alaskan Native/Pacific Islander; (e) Filipino-American; (f) Chinese-American; (g) Japanese-American; (h) Other Asian; (i) White/Caucasian; or (j) Other. The ethnic distribution of the student athletes in the survey was Caucasian (68.2%), African-American (14.3%) and Other (17.5%). In the Other minority group, Asian-Americans (5.4%) and Chicano/Latino (5.2%) were the two largest groups. The remainder of the other minorities was divided among four groups (Pacific Islanders; Native American/Alaska; Filipino; Pakistan/Indian). The ethnicity variable was recoded into the three categories of African-American (AF-AM), Caucasian, and Other. Most of the analyses used the dichotomous variable African-American and Non African-American (Caucasian plus Other).

#### **Social status [SOCIAL STATUS]**

Three indicators of social status were included in the survey: parents' (mother's and father's) educational level and student's reported social class. For parents' educational level, subjects were asked to report both their mother's and father's level of education from a set of five categories. These included the following options: (a) None/some high school; (b) High school diploma; (c) Some college; (d) College B.A. degree; or (e) Graduate degree (M.B.A, Ph.D., M.D.). Additionally, subjects were asked to identify their family's social class from a set of the following five categories: (a) poor; (b) working class; (c) middle class; (d) upper-middle class; and (e) upper class. Mother's education was employed as the measure of social status in this study (See results).

#### **Year [YEAR]**

Self reported year in school was designated by one of the following choices: (a) Freshman; (b) Sophomore; (c) Junior; (d) Senior; or (e) Junior College transfer.

## **Athletic Status**

### **Degree of Recruitment [RECRUIT]**

Subjects were asked to indicate the degree to which they were recruited. This variable was assessed by a five point Likert scale ranging from (a) Not at all recruited to (e) Heavily recruited.

### **Sport [SPORT]**

Respondents indicated the intercollegiate sport in which they participate. Fourteen choices were provided. These included: (a) Men's football; (b) Men's/Women's basketball; (c) Men's/Women's crew; (d) Men's/Women's cross country; (e) Men's baseball/Women's softball; (f) Men's/Women's track and field; (g) Men's/Women's gymnastics; (h) Men's/Women's soccer; (i) Men's/Women's swimming; (j) Men's/Women's tennis; (k) Women's field hockey; (l) Men's golf; (m) Women's volleyball; and (n) Men's water polo.

### **Scholarship [SCHOLARSHIP]**

Students were asked to report whether they were currently receiving a (a) full athletic scholarship; (b) partial athletic scholarship; or (c) no athletic scholarship.

### **Revenue Sport Status [REVENUE]**

On the basis of their sport, subjects were assigned to a dichotomous revenue/non-revenue category. Revenue sports were defined in this study as men's football and basketball. These sports are traditionally assumed to produce a surplus in revenue. Students participating on these teams were coded as revenue student athletes. All others were considered non-revenue student athletes.

## **Cognitive Factors**

### **Academic Preparation**

#### **High School Grade Point Average [HSGPA]**

Students' self reported their high school grade point average.

#### **Scholastic Aptitude Test, Verbal [SATV] and Mathematical [SATM]**

Students' Verbal and Mathematical Scholastic Aptitude Test scores were obtained from official admissions records. In this sample, SATV had a mean of 489.28 and a standard deviation of 95.89. Scores ranged from 280 to 780. The SATM had a mean of 586.53 and a standard deviation of 103.15. Scores ranged from 320 to 800.

### **Cumulative Grade Point Average at Berkeley [UCGPA]**

Students' cumulative grade point average[UCGPA] was obtained from official academic records at the end of the semester following (Spring 1994) the administration of the survey. The sample had a mean UCGPA of 2.86 and a standard deviation of .50. Scores ranged from 1.5 to 4.0.

### **Study**

#### **Metacognitive Study Strategies [ST STRAT]**

An eleven item Likert scale measured several metacognitive study strategies, including comprehension monitoring, determining task difficulty, main idea comprehension, memory strategies, employing background knowledge, and self questioning. The scale included the following items: (a) I spend more time on the difficult course material when studying for a test; (b) I study differently for different types of exams (essay, multiple choice, etc.); (c) I make up questions to help focus my reading; (d) I try to predict the questions on my exams while I study; (e) When I read I look for the important ideas; (f) When I read I try to focus mainly on facts and definitions; (g) After studying a topic, I ask myself whether I understood it before going on to something else; (h) I make a summary or outline after a reading assignment; (i) I often try to memorize what I am reading by going over and over it; (j) While studying, I try to relate new information to what I already know; and (k) While studying, I try to put things into my own words. Chronbach's Alpha for this scale was .58.

#### **Study Problems [ST PROB]**

This nine item Likert scale assessed reading and studying problems. The scale included the following items: (a) I often read a chapter and afterwards don't know what I have read; (b) I have trouble taking good class notes; (c) I read too slowly; (d) I find too many words I don't understand in my readings; (e) I read too fast and miss important points; (f) I find the reading in my courses too difficult; (g) I sometimes think I understood something, but find out I didn't when I take an exam; and (h) I have trouble identifying the most important ideas in my reading; (i) I do not manage my time wisely. Chronbach's Alpha for this scale was .61.

### **Non-Cognitive Factors**

#### **Achievement Motivation**

##### **Need Achievement [APPROACH & AVOID]**

The motivational theory of need achievement (Atkinson, 1957, 1964) assumes that individuals possess two learned drives — the motive to approach success and the motive to avoid

failure. Individuals with a heightened drive to achieve success anticipate pride, an emotion that propels them to approach further successes. Conversely, individuals high in failure avoidance fear failure and attempt to avoid the resultant feelings of shame by withdrawing or not trying. Need Achievement was measured by the Approach/Avoidance Achievement Questionnaire (AAAQ) (Covington & Omelich, 1991). The AAAQ questionnaire consisted of two scales. The first scale, composed of twenty one Likert scale items, reflects the tendency to approach success [APPROACH] in the academic context. The approach scale consisted of five subscales: (a) Risk-taking propensity; (b) Realistic goal setting; (c) Intrinsic engagement; (d) Persistence, and (e) Self-confidence. Chronbach's Alpha for this scale was .73.

The second scale, composed of thirteen items, reflects a general tendency to avoid failure in the academic domain [AVOID]. It is composed of four subscales: (a) Unrealistic achievement standards; (b) Fears about failure; (c) Doubts about one's ability; and (d) Disposition toward self-criticism as opposed to self-reward. Chronbach's Alpha for this scale was .77.

### **Academic Self-Worth [ACAD SELF-WORTH]**

Self-worth theory posits that achievement motivation is best understood in terms of attempts by individuals to maintain a positive self-image of competency, particularly when risking competitive failure (Covington, 1992). Academic Self-worth was measured by a six-item scale composed of three items from the Rosenberg Self Esteem measure (Rosenberg, 1965) and three items specific to academic achievement at Berkeley. The three items from the Rosenberg scale were: (a) All in all, I am inclined to feel that I am a failure in school; (b) I feel that I do not have much to be proud of as a student; and (c) On the whole I am satisfied with myself as a student. The three items developed for this study were (d) Do you think you have the ability to succeed academically here at UC Berkeley?; (e) Compared to the average UC Berkeley student, how would you rate your overall academic ability?; and (f) Do you think you deserved to get into UC Berkeley? Chronbach's Alpha for this scale was .90

### **Intrinsic Motivation [INTRINSIC]**

Intrinsic motivation is defined as an individual's propensity to approach a task for its inherent challenge and interest. This orientation emphasizes mastery and learning goals which involve increasing existing abilities and developing new skills. Four Likert scale items taken from the Motivated Strategies for Learning Questionnaire (Pintrich, 1991) were selected to measure an individual's intrinsic goal orientation in the academic domain. These four MSLQ items were: (a) The most satisfying thing in a course is trying to understand the content as thoroughly as possible; (b) I prefer course material that really challenges me so I can learn new things; (c) When I can, I

choose assignments that I can learn from even if they don't guarantee a good grade; and (d) I prefer course material that arouses my curiosity, even if it is difficult to learn. Chronbach's Alpha for this scale was .60.

### **Extrinsic Motivation [EXTRINSIC]**

Extrinsic motivation is defined as an individual's propensity to approach a task to gain external rewards. Four Likert scale items taken from the Motivated Strategies for Learning Questionnaire (Pintrich, 1991) were selected to measure an individual's extrinsic goal orientation in the academic achievement setting. The four MSLQ items were: (a) My main concern in my classes is getting good grades; (b) I want to get better grades in school than most other students get; (c) I want to do well in school because it is important to show my ability to others; and (d) Getting good grades is the most satisfying thing in school for me right now. Chronbach's Alpha for this scale was .64.

### **Self-Handicapping Excuses [SELF-HAND EX]**

Self-handicapping excuses are maladaptive motivational responses to challenging achievement tasks, which serve to protect an individual's perceived low self-worth in a particular achievement domain. A six item Likert scale measured the tendency to report excuses for lowered levels of academic effort and performance. The six items were: (a) If I worked harder I would get better grades; (b) I don't have enough time to study because my sport takes up so much time; (c) I'm so disorganized that I don't get all my work done; (d) My social life interferes with my studying; (e) If my courses were more interesting, I would get better grades; and (f) I would do much better on tests if I didn't get so nervous. Chronbach's Alpha for this scale was .60

## **Academic-Athletic Relationship**

### **Athletic-Academic Commitment [ATH-AC COM]**

A four item Likert scale measured the relative degree of commitment to athletics and academics. The items included: (a) I study only hard enough to stay eligible to play my sport; (b) I care more about sports than school; (c) I put more energy into sports now because I know I've got the rest of my life to get a college degree; and (d) It is more important for me to succeed in sports than to do well in school. The higher the score on this variable, the stronger the commitment to athletics. Chronbach's Alpha for this scale was .79.

### **Exploitation [EXPLOIT]**

A seven item Likert scale measured the degree to which student athletes believe they are exploited by the university for their athletic participation. The scale included the following items: (a) Sometimes I feel that I am being taken advantage of as an athlete; (b) I feel that the University cares more about me as an athlete than as a student; (c) Sometimes I feel that I am the property of the University; (d) I feel that I give more to the University than it gives back to me; (e) The University makes too much money out of its athletes; who see very little of it; (f) I feel that I have been given a lot of false promises about my athletic career here at CAL; and (g) It seems that younger recruits /players receive more attention and support than do the older players. Chronbach's Alpha for this scale was .75.

**Appendix B**  
**Complete Description of Results**



## **Results**

### **Data Analysis**

The major statistical technique employed in this study was regression analysis. It was supplemented by analysis of variance and t-tests where appropriate. The dependent variable was cumulative grade point average at Berkeley [UCGPA]. The following procedure was used. First, separate regression analyses of each background factor [Demographic and Athletic Status] with UCGPA were conducted to determine the overall predictive ability of the factor and the contribution of each variable in the factor to that prediction. This process was repeated for each cognitive [Academic Preparation, Study] and non-cognitive [Achievement Motivation and Athletic-Academic Relations] factor. For each of these factors, a second regression analysis was conducted which included those background and academic preparation variables were significant predictors of UCGPA. This analysis showed which variables within a factor made independent contributions to the prediction of UCGPA when background and academic preparation variables were controlled. When a variable makes an independent contribution to predicting the dependent variable, this means that when the other variables in the analysis are taken into account or controlled, this variable continues to add predictive power.

The sample size for the statistical analyses varied from 178 to 361 subjects. The missing data was due to the inability to obtain the UC grade point averages and academic preparation data for all subjects.

### **All Variables with UCGPA**

Table 1 presents the correlations of all variables in the study with UCGPA. With the exception of AVOID, all variables had statistically significant correlations with UCGPA. The highest correlations (over .40) were found for the three academic preparation variables, two athletic-academic relationship variables and for one achievement motivation variable. Three variables had correlations equal to or greater than .50: SATV, ATH-AC COM and ACAD SELF-WORTH.

Table 1

Correlations: All Variables with UCGPA

Variables	UCGPA
<b>DEMOGRAPHIC</b>	
GENDER	.25**
SOCIAL STATUS	.23**
ETHNICITY	-.19**
<b>ATHLETIC STATUS</b>	
RECRUIT	-.31**
SCHOLARSHIP	-.24**
REVENUE	-.26**
<b>ACAD PREPARATION</b>	
SATV	.62**
SATM	.48**
HSGPA	.46**
<b>STUDY</b>	
STUDY STRAT	.29**
STUDY PROB	-.30**
<b>ACH MOTIVATION</b>	
APPROACH	.39**
AVOID	-.07
EXTRINSIC	.18**
INTRINSIC	.30**
SELF-HAND EX	-.36**
ACAD SELF-WORTH	.55**
<b>ATH-ACAD REL</b>	
ATH-AC COM	-.50**
EXPLOIT	-.42**

\*p ≤ .05    \*\*p ≤ .01

## Background Factors

### Demographic Status

The demographic variables included GENDER, ETHNICITY, and SOCIAL STATUS. When UCGPA was regressed on the three demographic variables (see Table 2), GENDER, SOCIAL STATUS and ETHNICITY (African-American vs. Caucasian plus Other) were statistically significant predictors of UCGPA. GENDER and SOCIAL STATUS were positively related while ETHNICITY was negatively related. GENDER and SOCIAL STATUS were better predictors of UCGPA than ETHNICITY. Males, students of lower social status, and African-

American student athletes had lower UCGPAs than females, students of higher social status, and non African-American student athletes. The combined demographic variables showed a multiple R of .363, which accounted for 13.2% of the variance in UCGPA.

Table 2

Regression Analysis: UCGPA on Demographic Variables

Multiple R = .363  $R^2 = .132$  N = 289

Variables	Coeff.	r
GENDER	.22**	.25**
SOCIAL STATUS	.10**	.23**
ETHNICITY	-.25**	-.19**

\*  $p \leq .05$       \*\*  $p \leq .01$

### Gender

As Table 3 illustrates, female student athletes had statistically significantly higher UCGPAs than males. Females also had statistically significantly higher SATV and HSGPA scores. There were no statistically significant differences in SATM scores. When subjects' Verbal and Math SAT and HSGPA were controlled, females still showed statistically significantly higher UCGPAs (ANCOVA:  $F(1,184) = 24.01, p \leq .01$ ). This suggests that the academic advantage which females have over males cannot be fully explained by their superior academic preparation upon entering the university.

Table 3

T-Tests: Academic Preparation Variables by Gender

Gender				
Variables	Male	Female		
	M	M	df	t
UCGPA	2.76	3.01**	291	4.26
SATV	473.27	511.74**	260	3.26
SAT M	587.06	586.14	260	0.07
HSGPA	3.36	3.61**	237	3.90

\*  $p \leq .05$       \*\*  $p \leq .01$

When males and females were compared on the other variables in this study, t-tests showed some statistically significant differences by gender. Males were higher on ATH-AC COM [ $t(232) = -3.88, p \leq .01$ ], EXPLOIT [ $t(228) = -4.18, p \leq .01$ ], and SELF-HAND EX [ $t(351) = -4.28, p \leq .01$ ]. Male student athletes were more committed to the athletic role, felt more exploited, and were more prone to use excuses for their academic shortcomings. Females, on the other hand,

were less committed to the athletic role, expressed less feelings of exploitation, and were less prone to use excuses for academic shortcomings. These results suggest that non-cognitive factors may help explain the superior academic performance demonstrated by female student athletes over their male counterparts.

### Ethnicity

Table 4 shows that the mean UCGPA for Caucasians was 2.88, for Other 2.94, and for African-Americans 2.57. African-American student athletes had statistically significant lower UCGPAs than the other two groups. African-Americans also had statistically significantly lower SATM and SATV scores. For HSGPA, African-Americans reported lower grade point averages than the other two groups but the difference was not statistically significant ( $p=.07$ ). There was no statistically differences between the Caucasian and Other student athletes on UCGPA, SATM and SATV. There were statistically significant differences in social status between Caucasian and both the African-American and Other student athletes. Caucasians were of higher social status than the African-American and Other student athletes.

Table 4

ANOVA: Achievement by Ethnicity

Variables	Ethnicity			F
	CAUCASIAN M	AF-AM M	OTHER M	
UCGPA	2.88	2.57**	2.94	6.04**
SATV	595.03	478.70**	603.65	15.46**
SATM	495.88	406.96**	501.92	10.02**
HSGPA	3.49	3.25	3.45	2.40
SOCIAL STATUS	3.77**	3.39	3.35	6.15**

\*  $p \leq .05$       \*\*  $p \leq .01$

When African-American student athletes were compared to non African-American student athletes (CAUCASIAN plus OTHER combined) on the other variables included in this study, there were few statistically significant differences. However, African-American student athletes do report greater belief they were being exploited [EXPLOIT:  $t(228) = 3.58, p \leq .01$ ]. They also report that they were more highly recruited [RECRUIT:  $t(355) = 1.97, p \leq .05$ ] and feel more confident of their ability to become professional athletes [PRO:  $t(235) = 2.48, p \leq .01$ ]. There were no statistically significant differences in athletic role commitment [ATH-AC COM:  $t(231) = .10, p > .05$ ].

When ethnicity differences in UCGPA were examined by revenue status (see Table 5), the differences remained statistically significant for non-revenue athletes [ $t(244) = -1.98, p \leq .05$ ] but disappeared for revenue student athletes [ $t(45) = 1.65, p = ns$ ].

Table 5

UCGPA: Revenue by Ethnicity

	AF-AM	NON AF-AM
REVENUE	2.51	2.56
NON REVENUE	2.63	2.93*

\*  $p \leq .05$       \*\*  $p \leq .01$

The powerful influence of revenue status is supported by similar findings on the variable EXPLOIT and the possibility of becoming a professional athlete (PRO). The finding that African-American student athletes reported stronger beliefs that they were being exploited and a stronger belief in the possibility of a professional career than non African-American student athletes becomes non-significant when African-American student athletes were compared to non African-American student athletes within the revenue sports [EXPLOIT:  $t(36) = .243, p = ns$ ] ; [PRO:  $t(40) = 1.34, p = ns$ ]. These findings suggest that the difference between African-American and non African-American student athletes is more a function of revenue status than ethnicity.

### Social Status

All three indicators of social status were statistically significantly correlated with UCGPA (see Table 6). When UCGPA was regressed on the social status variables, they produced a multiple R of .253, which accounted for 6.4% of the variance. However, only mother's education had a statistically significant relationship to UCGPA. In the remainder of this report, therefore, mother's education will be used as the social status measure.

Table 6

Regression Analysis: UCGPA on Social Status Variables

Multiple R = .253  $R^2 = .064$  N = 289

Variables	Coeff.	r
Mother's Education	.09**	.23**
Father's Education	.04	.19**
SES	.02	.12*

\*  $p \leq .05$       \*\*  $p \leq .01$

SOCIAL STATUS, as measured by mother's education, had a statistically significant, but relatively low, correlation with UCGPA ( $r = .23^{**}$ ). The higher the student athlete's social status, the higher the UCGPA. Significant but low correlations were also found with a number of the other variables in the study. Significant positive correlations were found between SOCIAL STATUS and the academic preparation variables of SATV ( $r = .34^{**}$ ), SATM ( $r = .24^{**}$ ), and HSGPA ( $r = .22$ ). These findings suggest that the higher the student's social status, the greater the student athlete's academic preparation and academic performance. There were no statistically significant GENDER [ $t(352) = -.87, p = ns$ ] or ETHNICITY (AF-AM vs. NONAF-AM) [ $t(352) = -1.69, p = ns$ ] differences in social status.

### Year

It seems reasonable to assume that there would be developmental changes in a number of the variables studied. However, there appear to be few, if any, developmental trends in this data. The cross sectional rather than longitudinal nature of the data may explain these results. Consequently, year in school comparisons will not be part of the analysis of the data.

### Athletic Status

The athletic status variables included degree of athletic recruitment to the university [RECRUIT], type of sport played [SPORT], whether the sport is revenue-producing [REVENUE], and whether the student-athlete received some form of athletic scholarship [SCHOLARSHIP]. The three variables, RECRUIT, REVENUE, and SCHOLARSHIP, were negatively correlated with UCGPA (See Table 7). The more the student athlete was recruited to the university, the lower his or her UCGPA. Revenue and scholarship student athletes had lower UCGPAs than non-revenue and non scholarship student athletes. The regression analysis (Table 7) with these three variables as predictors of UCGPA showed RECRUIT and REVENUE were statistically significant predictors of UCGPA, with REVENUE the strongest predictor. SCHOLARSHIP was not a statistically significant predictor. The combined athletic status variables produced a multiple R of .386, which accounted for 14.9% of the variance in UCGPA.

Table 7

Regression Analysis: UCGPA on Athletic Status Variables

Multiple R = .386  $R^2 = .149$  N = 291

Variables	Coeff.	r
RECRUIT	-.12**	-.31**
SCHOLARSHIP	-.06	-.24**
REVENUE	-.35**	-.26**

\*  $p \leq .05$  \*\*  $p \leq .01$

When the two statistically significant athletic status variables were entered in a regression analysis with the academic preparation and demographic variables (except gender), only REVENUE remained a statistically significant predictor of UCGPA (See Table 8).

Table 8

Multiple R = .656 R<sup>2</sup> = .431 N = 180

Variables	Coeff.	r
SATV	.19**	.62**
SATM	.08**	.48**
HSGPA	.04*	.46**
SOCIAL STATUS	.03	.23**
ETHNICITY	.05	-.19**
RECRUIT	-.00	-.31**
REVENUE	-.20**	-.26**

\* p ≤ .05      \*\* p ≤ .01

### Recruitment

As Table 9 demonstrates, the degree of recruitment was negatively correlated with all measures of academic preparation and UCGPA. The more the student athletes reported they were recruited to the university, the lower their entering academic preparation and subsequent UCGPA.

Table 9

Correlations: Recruitment by Achievement Variables

Variables	Recruit
	r
SATV	-.42**
SATM	-.47**
HSGPA	-.32**
UCGPA	-.31**

\* p ≤ .05      \*\* p ≤ .01

Correlations between RECRUIT and other variables included in this study showed strong statistically significant positive correlations with EXPLOIT (r = .37\*\*) and ATH-AC COM (r = .51\*\*). The more heavily that student athletes reported being recruited to the university, the more they reported being committed to an athletic role and the greater their feelings of exploitation. RECRUIT had a negative correlation with ACAD SELF-WORTH (r = -.24\*\*) and positive but low correlations with SELF-HAND EX (r = .17\*) and STUDY PROB (r = .13\*). These findings suggest that the more heavily student athletes were recruited to the university, the lower their academic self confidence, the greater their use of self-handicapping excuses, and the more they

experienced study problems. As such, being heavily recruited seems to be associated with a number of negative characteristics. As would be expected, heavy recruitment was highly correlated with revenue status ( $r = .67^{**}$ ), as revenue athletes tend to be the most highly recruited.

### Sport

Table 10 presents the mean UCGPA by sport. UCGPAs collected for the present study were compared to data obtained from the Athletic Programs for Student-Athletes (formerly called Athletic Study Center) which had larger sample sizes for some sports. Individual sports were ranked from high to low based on the Athletic Study Center data. The revenue sports, men's football and basketball, show the lowest UCGPAs. Women's sports generally had higher UCGPAs than the men's sports. The only exception was women's softball and soccer, which were lower than the other women's sports. The traditionally middle class and upper middle class American sports (crew, field hockey, gymnastics, swimming, tennis) tended to have the highest grade point averages. Golf and soccer, however, were exceptions to this trend.

Table 10

Mean UCGPA by Sport

Sport	UCGPA		ASC
	M	n	M
Cross Country (W)	3.33	4	3.28
Field Hockey (W)	3.26	20	3.14
Swimming (M)	2.90	16	3.12
Swimming (W)	3.03	12	3.10
Tennis (W)	2.91	16	3.10
Cross Country (M)	3.04	6	3.09
Volleyball (W)	2.64	4	3.07
Gymnastics (W)	2.87	11	3.07
Gymnastics (M)	3.05	10	3.05
Crew (W)	3.17	27	3.02
Basketball (W)	3.05	12	3.02
Crew (M)	—	—	2.92
Track (W)	2.79	7	2.93
Tennis (M)	2.75	26	2.91
Track (M)	2.84	7	2.89
Waterpolo (M)	2.91	33	2.78
Baseball (M)	2.78	31	2.69
Soccer (W)	2.66	2	2.68
Softball (W)	2.68	14	2.67
Soccer (M)	2.78	14	2.60
Football (M)	2.53	66	2.58
Golf (M)	2.67	13	2.56
Basketball (M)	2.66	9	2.54



### Scholarship Status

In our sample of student athletes, 26.9% received full scholarships, 21.9% received partial scholarships, and the remaining 51.3% received no scholarship. Revenue producing sports comprised 60.4% of the full scholarship student athletes. The remaining full scholarships (39.5%) were distributed in the sports of swimming, tennis, softball and volleyball. Partial scholarships were distributed among all of the other sports except for crew, cross country, and field hockey.

Table 11 presents the academic achievement data by scholarship status. On all four achievement variables, student athletes receiving no scholarship compensation were statistically significantly higher than students on partial or full scholarship. Student athletes on partial scholarship showed no statistically significant difference from those individuals receiving full scholarships.

Table 11

ANOVA: Achievement by Scholarship Status

Variables	Scholarship Status			F
	Full (n=96)	Partial (n= 78)	None (n=183)	
	M	M	M	
UCGPA	2.73	2.68	2.98**	12.08
SATV	450.86	442.59	522.50**	23.7
SATM	521.55	552.24	626.04**	31.2
HSGPA	3.34	3.27	3.59**	11.97

\*  $p \leq .05$

\*\*  $p \leq .01$

### Revenue

20.8% of the student athletes sampled were revenue athletes, while the remaining 79.2% were non-revenue athletes. Of the revenue student athletes, 79% reported that they were on full scholarship and almost half (48.7%) were African-American. The revenue student athletes reported that they were more highly recruited than the non-revenue student athletes [RECRUIT:  $t(355) = 3.64$ ,  $p \leq .01$ ]. They were also more confident of their prospects of becoming professional athletes [PRO:  $t(235) = 4.31$ ,  $p \leq .01$ ] and were of lower social status than the non-revenue athletes [SOCIAL STATUS:  $t(352) = -2.70$ ,  $p \leq .05$ ].

Table 12 illustrates that revenue student athletes' academic performance was lower than non-revenue student athletes on UCGPA, SATV, SATM, and HSGPA. When academic preparation (SATV, SATM, HSGPA), social status (SOCIAL STATUS), and ethnicity (AF-AM versus OTHER) were controlled, revenue status still accounts for statistically significant differences in UCGPA [ANCOVA:  $F(1,174) = 5.25$ ,  $p \leq .05$ ]. Revenue status makes an independent negative contribution to UCGPA.

Table 12

## Achievement by Revenue

Variables	Revenue	Non Rev.		
	M	M	df	t
UCGPA	2.57	2.91**	291	- 4.45
SATV	442.11	497.28**	260	- 3.34
SATM	527.89	596.47**	260	- 3.89
HSGPA	3.27	3.51**	237	- 2.93

\*  $p \leq .05$ \*\*  $p \leq .01$ 

Comparisons between revenue and non-revenue student athletes on the other variables included in this study showed a number of differences. Revenue student athletes reported lower metacognitive study strategies [ST STRAT:  $t(347) = 3.27$ ,  $p \leq .01$ ] and more study problems [STUDY PROB:  $t(346) = 1.96$ ,  $p \leq .05$ ]. They were less intrinsically motivated [INTRINSIC:  $t(348) = -2.08$ ,  $p \leq .05$ ], and reported more excuses for lowered academic performance [SELF-HAND EX:  $t(351) = 3.35$ ,  $p \leq .01$ ]. These student athletes were more committed to the athletic role [ATH-AC COM:  $t(231) = 3.00$ ,  $p \leq .01$ ] and reported a greater feelings of exploitation by the university [EXPLOIT:  $t(228) = -7.42$ ,  $p \leq .01$ ].

## Cognitive Factors

## Academic Preparation

All three academic preparation variables (SATV, SATM, HSGPA) showed substantial zero order correlations with UCGPA. A regression analysis, as depicted in Table 13, shows a multiple R of .639, which accounted for 40.8% of the variance. Each academic preparation variable made a statistically significant contribution to predicting UCGPA. SATV showed the highest correlation with UCGPA. Student athletes' academic performance and effort in high school, as reflected in high school grade point average and scholastic aptitude test scores, were very strong predictors of successful academic performance at Berkeley.

Table 13

## Regression Analysis: UCGPA on Academic Preparation Variables

Multiple R = .639  $R^2 = .408$  N = 184

Variables	Coeff.	r
SATV	.21**	.62**
SATM	.09*	.48**
HSGPA	.04**	.46**

\* $p \leq .05$  \*\*  $p \leq .01$

When UCGPA was regressed on the background factors (athletic and demographic status variables) and the academic preparation variables (see Table 14), only the academic preparation variables were statistically significantly related to UCGPA. Thus, the academic preparation variables made independent contributions to UCGPA when background factors were controlled.

Table 14

Regression Analysis: UCGPA on Background and Academic Preparation Variables

Multiple R = .665  $R^2 = .442$  N = 181

Variables	Coeff.	r
SATV	.18**	.62**
SATM	.10**	.48**
HSGPA	.04*	.46**
GENDER	.12#	.25**
SOCIAL STATUS	.03	.23**
ETHNICITY	.04	-.19
RECRUIT	-.01	-.31
REVENUE	-.13	-.26**

\*  $p \leq .05$  \*\*  $p \leq .01$  #  $p > .05 \leq .10$

### Study

A regression analysis showed STUDY PROB and STUDY STRAT were statistically significant predictors of UCGPA (See Table 15). STUDY STRAT was positively related, while STUDY PROB was negatively related. Student athletes who were better academic performers reported better metacognitive study strategies and fewer reading and study problems. Taken together, both variables produced a multiple R of .369, which accounted for 13.6% of the variance in UCGPA.

Table 15

Regression Analysis: UCGPA on Study Problems and Metacognitive Study Strategies

Multiple R = .369  $R^2 = .136$  N = 280

Variables	Coeff.	r
STUDY STRAT	.02**	.29**
STUDY PROB	-.02**	-.30**

\*  $p \leq .05$  \*\*  $p \leq .01$

Table 16 illustrates the results when the study variables were entered into a regression analysis with academic preparation, demographic and athletic status variables. Both study variables drop below significance.

Table 16

Regression Analysis: UCGPA on Study, Academic Preparation, Athletic Status and Demographic Status

Multiple R = .669  $R^2 = .447$  N = 176

Variables	Coeff.	r
STUDY STRAT	.01	.29**
STUDY PROB	-.00	-.30**
SATV	.17**	.62**
SATM	.09*	.48**
HSGPA	.04*	.46**
GENDER	.12	.25**
SOCIAL STATUS	.03	.23**
ETHNICITY	.07	-.19**
RECRUIT	.00	-.31**
REVENUE	-.06	-.26**

\*  $p \leq .05$       \*\*  $p \leq .01$

### Non-Cognitive Factors

#### Achievement Motivation

Table 17 presents the regression analysis of UCGPA on the achievement motivation variables. The regression analysis showed that ACAD SELF-WORTH, AVOID, INTRINSIC, and SELF-HAND EX were statistically significant predictors of UCGPA. The academically superior students were more confident of their academic ability and were more intrinsically motivated within the academic setting. They were less oriented toward avoiding failure and were less prone to use excuses for poor academic performance. The achievement motivation variables produced a multiple R of .661, which accounted for 43.6% of the variance in UCGPA.

Table 17

Regression Analysis : UCGPA on Achievement Motivation

Multiple R = .661  $R^2 = .436$  N = 184

Variables	Coeff.	r
APPROACH	-.00	.39**
AVOID	.01*	-.07
EXTRINSIC	.01	.18**
INTRINSIC	.04**	.30**
ACAD SELF-WORTH	.06**	.55**
SELF-HAND EX	-.03**	-.36**

\*  $p \leq .05$       \*\*  $p \leq .01$

When the statistically significant athletic status, demographic status, and academic preparation variables were added to the achievement motivation variables in a regression analysis (See Table 18), only ACAD SELF-WORTH and SELF-HAND EX remained statistically significant. These two variables made independent contributions to predicting academic performance.

Table 18

Regression Analysis : UCGPA on Achievement Motivation, Athletic Status, Demographic Status, and Academic Preparation

Multiple R = .731  $R^2 = .534$  N = 162

Variables	Coeff.	r
ACAD SELF-WORTH	.04**	.55**
APPROACH	.00	.39**
AVOID	-.01	-.07
EXTRINSIC	.01	.18**
INTRINSIC	.01	.30**
SELF-HAND EX	-.02*	-.36**
SATV	.15**	.62**
SATM	.07#	.48**
HSGPA	.00	.46**
GENDER	.14*	.25**
SOCIAL STATUS	.02	.23**
ETHNICITY	-.03	-.19**
RECRUIT	.01	-.31**
REVENUE	-.03	-.26**

\*  $p \leq .05$       \*\*  $p \leq .01$       #  $p > .05 \leq .10$

ACAD SELF-WORTH was negatively correlated with ATH-AC COM ( $r = -.45$ ). The lower student athletes' academic self-worth, the more they were committed to athletics and the less to academics.

### Academic-Athletic Relationship

As Table 19 illustrates, the zero order correlations between the two academic-athletic relationship variables showed statistically significant and high correlations with UCGPA. A regression analysis showed both ATH-AC COM and EXPLOIT to be statistically significant predictors of UCGPA. Together, they produce a multiple R of .550, which accounted for a full 30.3% of the variance.

Table 19

Regression Analysis :UCGPA on Academic-Athletic Relationship

Multiple R = .550  $R^2 = .303$  N = 193

Variables	Coeff.	r
ATH-AC COM	-.05**	-.50**
EXPLOIT	-.02**	-.42**

\*  $p \leq .05$  \*\*  $p \leq .01$ 

When the athletic and demographic status, as well as academic preparation variables were added to the regression analysis (see Table 20), both EXPLOIT and ATH-AC COM continue to be statistically significant predictors of UCGPA. As such, these variables made independent contributions to UCGPA.

Table 20

Regression Analysis: UCGPA on Academic-Athletic Relationship, Academic Preparation, Athletic Status, and Demographic Status

Multiple R = .723  $R^2 = .523$  N = 171

Variables	Coeff.	r
ATH-AC COM	-.03**	.50**
EXPLOIT	-.02**	-.42**
SATV	.14**	.62**
SATM	.11**	.48**
HSGPA	.03#	.46**
GENDER	.10#	.25**
SOCIAL STATUS	.04	.23**
ETHNICITY	.09	-.19**
REVENUE	.06	-.26**
RECRUIT	.04	-.31**

\*  $p \leq .05$  \*\*  $p \leq .01$  #  $p > .05 \leq .10$ 

ATH-AC COM had moderate to high correlations with a number of other variables [SATV,  $r = -.38$ ; SATM,  $r = -.30$ ; HSGPA,  $r = -.37$ ; STUDY PROB,  $r = .33$ ; RECRUIT,  $r = .33$ ; ACAD SELF-WORTH,  $r = -.37$ ; APPROACH:  $r = -.40$ ; INTRINSIC,  $r = -.36$ ; SELF-HAND EX,  $r = .43$ ; EXPLOIT,  $r = .40$ ].

### Relative Importance of Factors and Variables

The relative importance of the factors and variables under study can be looked at in the following three ways: comparing variance accounted for by groups of factors, comparing groups of factors, and comparing individual variables.

Table 21 illustrates the results when the three groups of factors-cognitive, non-cognitive, and background factors were taken separately. Non-cognitive and cognitive factors each account for substantially more variance than the background factors.

Table 21

Percent of UCGPA Variance Accounted for by Each Group of Factors

Factor	% Var.
NON-COGNITIVE	44.6
COGNITIVE	42.4
BACKGROUND	19.3

### All Factors Compared

Table 22 illustrates the percentage of variance accounted for when all six factors were analyzed separately as predictors of UCGPA. Three factors accounted for almost twice as much variance as the other three factors. They were achievement motivation, academic preparation, and academic-athletic relationships. Study, athletic status, and demographic status factors accounted for considerably less variance than these three factors.

Table 22

Percent Variance of UCGPA Accounted for by Each Factor Separately

Factor	% Var.
ACHIEVEMENT MOTIVATION	43.6
ACADEMIC PREPARATION	40.8
ACADEMIC - ATHLETIC RELATION.	30.3
ATHLETIC STATUS	14.9
STUDY	13.6
DEMOGRAPHIC STATUS	13.2

### All Variables Compared

Table 23 illustrates the results when all the statistically significant independent predictor variables from each factor were included in a single regression analysis.

Table 23

Regression Analysis: UCGPA on All Variables

Multiple R = .752  $R^2 = .566$  N = 163

Variable	Coeff.
ACAD SELF-WORTH	.03**
ATH-AC COM	-.02*
EXPLOIT	-.01*
SATV	.16**
SATM	.08**
GENDER	.11#
STUDY PROB	-.01#
SELF-HAND EX	-.02#
STUDY STRAT	.01
SOCIAL STATUS	.03
ETHNICITY	.04
RECRUIT	.03
REVENUE	-.04
HSGPA	.02

\*  $p \leq .05$  \*\*  $p \leq .01$  #  $p > .05 \leq .10$

ACAD SELF-WORTH, ATH-AC COM, EXPLOIT, SATV, and SATM were all statistically significant predictors of academic performance. GENDER, STUDY PROB, and SELF-HAND EX approached significance.