Faculty and Male Football and Basketball Players on University Campuses: An Empirical Investigation of the "Intellectual" as Mentor to the Student Athlete

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Faculty and Male Football and Basketball Players on University Campuses: An Empirical Investigation of the "Intellectual" as Mentor to the Student Athlete

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Key words: athletics, faculty, interaction, reform

In past years, a substantial amount of research has been conducted in an effort to determine significant predictor variables, such as demographic and educational criteria of student athletes' academic achievement (Lang, Dunham, & Alpert, 1988; Sellers, 1992; Walter, Smith, Hoey, & Wilhem, 1987). Although these studies yield a considerable amount of information relative to selected predictors of academic performance among college student athletes (Siegel, 1994), few investigators have been concerned with the environmental influence on student athletes (Edwards, 1989; Godley, 1999; Sellers, 1992). The college environment encompasses all that happens to student athletes during their educational programs which may affect and influence the intellectual desired outcome— to matriculate and graduate (Astin, 1993b).

One facet of the environmental experience involves student athletes' interaction with faculty members, which often influences their educational success in negative ways (Engstrom, Sedlacek, & McEwen, 1995; Sailes, 1993). Unappealing, negative attitudes toward student athletes on college campuses have endured since organized sports were associated with American higher education (Smith, 1988; Thelin, 1996). While previous research has explored the negative beliefs and perceptions about student athletes, information is limited regarding environmental predictors of their academic success as they relate to faculty members (Comeaux and Harrison, 2001; Sellers, 1992).

Although some coaches and athletes often believe student athletes' athletic role supersedes their academic integration on campus, many students revere and even idolize faculty members, and, consequently, faculty develop and cultivate meaningful relationships with many college students (Adler & Adler, 1991; Etizen, 1999; Light, 2001). The "intellectual" as mentor is the basic process of university faculty members performing the role of "intellectual coach." This study explores the relationship between student athletes and faculty and the impact of specific forms of student athlete and faculty interaction on academic achievement. Specifically, this study examines selected faculty interaction measures of academic achievement among student athletes in the revenue-producing sports of men's basketball and football. The authors felt it necessary to recognize and explore a group within the college community, such as faculty who frequently interact with and influence student athletes' personal and academic development.

Literature Review

Few scholars have explored male student athletes' relationship with university faculty (Comeaux, 2005a; Comeaux & Harrison, 2001). This section focuses on the conditional effects of student-faculty interaction. In-
cluded in this section is a discussion of environmental predictors of academic success among Black and White student athletes and literature on both formal and informal student-faculty interaction as well as the nature and content of interaction.

Comeaux and Harrison (2001) conducted a study focusing on environmental predictors of academic achievement among Black and White revenue generating athletes. Their findings confirmed racial differences between Black and White students impacting specific forms of student-faculty interaction on academic achievement. For example, faculty levels of involvement with White student athletes' professional goals, assistance with study skills, and encouragement to pursue graduate degrees were significant predictors of academic success, whereas faculty involvement with Black student athletes was only significant for encouragement to pursue graduate school. The authors' results also suggested that the contributions of Black and White student athletes' interaction with faculty were to some extent conditional on the nature of the contact.

Faculty members influence student outcomes both positively and negatively (Chickering, 1969; Terenzini, Theophilides, & Lorang, 1984). Although research on college outcomes has increased, there are few empirical studies on student-faculty interaction. However, researchers not only understand the general types of college experiences and how they may be associated with certain outcomes, but many are also exploring the specific nature of the interaction leading to the desired outcome (Milem & Berger, 1997; Pascarella, 1985).

Jacob (1957) contended that some faculty exert a profound influence on students as he states “faculty influence appears more profound at institutions where association between faculty and students is normal and frequent, and students find teachers receptive to unhurried conversations out of class” (p. 8).

By contrast, Pascarella, Dab, Terenzini, and Iverson (1985) concluded that the quality of student-faculty interactions may be more important in the personal and intellectual development of commuter students than the frequency of interactions. Milem and Berger (1997) reported that students benefit from student-faculty out-of-class communication in overall college experience, because students were more likely to have greater levels of academic integration into the college or university.

It is apparent that students differ in the degree to which college experiences have a socializing effect (Feinberg, 1972). The frequency of interaction does not seem to be as relevant to students; rather, the quality of the relationship is more important (Pascarella et al., 1983; Terenzini et al., 1984). Moreover, Endo and Harpel (1981) compared formal versus informal student-faculty interaction and found informal interaction positively affected certain educational outcomes more than formal interactions. In short, faculty who are willing to extend communication beyond the classroom and are connected with students in an intimate enough way to discern personal qualities have the potential to significantly influence the students’ lives, and vice versa.

Method

Sample

The data in this study are from the Cooperative Institutional Research Program (CIRP) Student Information Form (SIF; CIRP, 1996) and the College Student Survey (CSS; CIRP, 2000) sponsored by the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA), and the Graduate School of Education and Information Studies. Although the reliability of the instrument has not been formally measured during the past 30 years, the CIRP has generated an array of normative, substantive, and methodological research about a wide range of issues in American higher education (Sax, Astin, Korn, & Mahoney, 1996). One researcher found the research based on CIRP data to be the most widely cited in American higher education research (Budd, 1990).

The CIRP data used in this study included information drawn from two surveys: SIF and CSS. The 1996 SIF was administered to first-time college freshmen during orientation programs the first weeks of fall classes. Responses to the SIF were received from 216,141 students at 481 institutions. The CSS was administered to fourth-year students in spring 2000, and 27,940 responses were received from 148 institutions. Of the total students, 12,556 students filled out both the SIF in 1996 and the CSS in 2000.

The primary purpose of the CIRP is to provide baseline data on entering college freshmen in order to follow them over time to assess how college contributes to their and development. The CIRP data offer an extensive set of longitudinally collected variables with which to answer a variety of questions pertaining to student success and retention patterns in higher education. In addition, a known strength of the CIRP data set is its abundance of student input and environmental variables that can be associated with the dependent variable or outcome. Student input characteristics are assessed prior to exposure to the environment, and the environmental characteristics are assessed prior to the outcome assessment.

The final sample analyzed for this study included 693 football and basketball players attending predominantly White institutions. Given the longitudinal nature of this study, only students who completed all items of interest
on both surveys were included. While the sample was not randomly selected and is not nationally representative of the population, it represents a large number of students and student athletes from various 4-year colleges and universities. It is also of interest to note that student athletes as a nontraditional group on college campus are distinctive in their attitudes and perceptions of faculty members, and, therefore, no comparison group was used for this study (Comeaux, 2005b).

Data Analysis

This study uses the Input-Environment-Outcome (I-E-O) model for studying the impact of college on students (Astin, 1993b). “Inputs” refer to the students’ entering characteristics, “environment” is that to which the student is exposed to during college, (i.e., faculty, peers, diverse views, etc.), and “outcomes” are the students’ characteristics after interacting with the environment (Astin, 1993b). The power of Astin’s I-E-O model is its ability to allow researchers to measure student change during college by comparing outcome characteristics with input characteristics. In short, this framework allows us to examine the impact of the college environment on the student while controlling for the student’s entering characteristics.

Stepwise linear multiple regression analysis was conducted to examine the effect of the input and environmental variables on the outcome measure—academic achievement. The stepwise regression procedure allows the researcher to group similar or related independent variables together within one block and then order the blocks temporally. The stepwise linear regression is conducive to the Causal Analytical Modeling with Blocked Regression Analysis (CAMBRA) method, which allows for an examination of the changes in the partial regression coefficients (betas) as each variable block enters the equation (Dey & Astin, 1989). Because independent variables are sometimes highly correlated, CAMBRA is a tool for understanding and identifying multicollinearity in a regression equation. For this study, the reader is able to analyze how the beta coefficients change as input and environmental characteristics related to academic achievement are added to the equation.

Outcome Variable

The outcome variable in this study is students’ self-reported college grade point average, a quantitative measure of academic achievement. College grades were obtained from students’ self-reported grade-point average (GPA) on the follow-up questionnaire. GPA is scored on a six-point scale, from “A” to “G or less.” The pretest for this outcome is students’ high school GPA (scored on an eight-point scale, from “A or A+” to “D”). The authors recognize that academic achievement encompasses much more than GPA; however, given the variables within the dataset, college GPA was the most appropriate measure of academic achievement, coupled with the fact that college GPA is the most common outcome when investigating student achievement in higher education (Astin, 1993a, 1993b).

Independent Variables

Independent variables were composed of both the student input measures and the environmental measures and blocked in the following order: (a) students’ past achievement, family background, and high school environmental characteristics (inputs), (b) institutional type and control (environment), and (c) student interaction with college characteristics (environment). Several independent variables, such as prior academic achievement, family background, and student interaction with teachers in high school, were used to determine whether these factors remained consistent with past research findings on academic achievement as well as to control for students’ incoming propensity to interact with faculty. Consistent with the literature, we expected that just as these incoming characteristics affect academic achievement for college students who do not play sports so will they affect achievement for student athletes in revenue-generating sports.

Input Variables

Student background characteristics (Block 1) included measures of past achievement, family background, and high school environmental characteristics (see Appendix A for coding scheme). The incoming achievement measure consists of student’s high school grades. The family background variable was conceptualized as socioeconomic status (a composite of mother’s and father’s educational attainment and students’ estimate of their parents’ income). Because past research has shown that students who come from families with a higher income have more resources and, therefore, tend to do better in college, we expected that in our study family characteristics, such as socioeconomic status (SES), would influence academic achievement.

Two dichotomous variables representing different racial/ethnic categories were also included in the input block: Caucasian/White and African American/Black. It is important that we included and also controlled for race, because a disproportionately high number of Blacks and Whites are involved in revenue-generating sports, such as football and basketball.

Finally, high school environmental characteristics consisted of student athlete and teacher relation mea-
ures (see Appendix A). The significance of incorporating these measures was to eliminate self-selecting students, thereby decreasing the chance of a Type I error (finding a relationship between the environment and the outcome measure when a relationship does not exist). It was impossible to eliminate all possible biasing input variables; however, the goal was to minimize the probability of a Type I error.

**Environmental Variables**

The following college environmental measures were included in the regression analysis: institutional type and control (Block 2) and measures of student athlete interaction with faculty members (Block 3; see Appendix A). Institutional type and control are both dichotomous variables. Institutional type is defined as either university status or 4-year state college status, while institutional control is defined as either public or private. It is important to know whether institutional-level variables will have a significant effect on college GPA over the college environment variables-student athlete-faculty interaction. For example, controlling for institutional type allowed us to measure whether student athlete interaction with faculty was more prevalent at universities or 4-year state schools.

The student athlete-faculty interaction measures are the core of this study and measure interaction on a number of levels, including academic, personal, and professional. The nine faculty interaction variables to which student athletes responded included: (a) faculty provided help in achieving professional goal; (b) faculty provided intellectual challenge and stimulation; (c) faculty provided encouragement for graduate school; (d) faculty provided assistance with study skills; (e) faculty provided respect; (f) faculty provided an opportunity to discuss coursework outside class; (g) faculty provided emotional support and encouragement; (h) faculty provided advice about education program; and (i) faculty provided negative feedback about academic work.

**Results**

**Input Effects**

Although this study focused primarily on the impact of student athletes’ environmental experiences on academic achievement, input variables were incorporated because of their potential impact on the dependent variable. Table 1 reveals high school GPA as the most powerful predictor of college GPA (beta^1 = .44), suggesting that students with high GPAs in high school are more likely to achieve high GPAs in college. Examining Table 1 more closely using the CAMBRA method, we noticed that the African American beta coefficient decreased substantially at Step 1, when high school GPA entered the regression equation (beta = -.07), suggesting that Blacks tended to enter college with lower high school grades than non-Blacks. After the first step, the race coefficient remained stable as the environmental variables entered the equation, suggesting that Black student athletes did not differ significantly from Whites with regard to environmental variables. Furthermore, in terms of input variables, mother’s education, father’s education, parental income (SES), and student teacher interaction in high school were not significant predictors of academic success in college.

**Environmental Effects**

As indicated in Table 1, six of the nine environmental variables entered the equation, indicating a relatively high impact on the dependent variable-academic achievement. The data reveal that the environmental measure—facult provided intellectual challenge and stimulation—had a positive effect on college GPA (beta = .16), suggesting that students who are challenged and stimulated intellectually by faculty tend to perform higher academically in college. Further, the data showed a positive relationship between the environmental measure—faculty provided encouragement for graduate school—with college GPA (beta = .13). Consistent with Light’s (2001) research, this suggests that student athletes whose instructors encourage them to attend graduate school perform better academically in college. Several other environmental variables entered the regression equation from Steps 5 through 8—such as faculty provided help in achieving professional goals and faculty provided respect (beta = .10 and beta = .10 respectively)—indicating a moderate yet significant positive impact on college GPA. Finally, the forms of interaction—faculty provided support and encouragement and faculty provided opportunity to discuss coursework outside of class—entered the equation positively, and both became negative by the last step (beta = -.08 and beta = -.08 respectively). That is, students who reported that faculty provided more encouragement and opportunities to discuss coursework after class received lower grades. It makes sense that students who are doing poorly academically require more support and encouragement as well as more frequent opportunities to meet with faculty after class than students who are doing well. Finally, it is of interest to note that institutional type and control were not significant predictors of academic success for this study. For example, attending a university, 4-year state college, public, or private institution had no bearing on student athlete-faculty interaction and its impact on GPA.
Discussion

The present investigation supported the impact of interaction between student characteristics and the college environment on academic achievement, at least for the male student athletes in this study. Of course, we cannot ignore that, consistent with past literature, high school GPA was the strongest predictor of college GPA and is also a predictor of college GPA for student athletes. Such a finding is not surprising, because student athletes are a subsample of college students. Racial differences were also found in terms of academic preparation between Black and White student athletes. With White student athletes receiving higher high school GPAs than Blacks, it appeared that many Black student athletes matriculated from high schools and environments with inferior academic resources and preparation (Sellers, 1992).

Perhaps more importantly, several college environmental measures are relatively strong predictors of academic achievement. Consistent with previous studies, this study showed that the impact of the contact or interaction is, to some extent, contingent on the specific nature of the interaction (Comeaux and Harrison, 2001). For example, faculty who provided intellectual challenges and stimulation for their students, encouraged graduate school, and helped in achieving professional goals made a relatively strong contribution to student success. Al-

<table>
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<tr>
<th>Step</th>
<th>Variable</th>
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<td>2</td>
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<tr>
<td>Environment (entering)</td>
<td>Faculty provided intellectual challenge and stimulation</td>
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<tr>
<td>3</td>
<td>.53</td>
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<td>8</td>
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<td>-.06</td>
<td>-.06</td>
<td>-.08</td>
</tr>
</tbody>
</table>

Not entering:
- Race: White
- Mother's education
- Asked teacher for advice after class (high school)
- Talking with teachers outside of class (high school)
- Institutional type (university / 4-year college)
- Faculty provided negative feedback about academic work (college)
- Parental Income
- Father's education
- Was a guest in teacher's home (high school)
- Institutional control (public/private)
- Faculty provided advice about education program (college)
- Faculty provided assistance w/ study skills

Note. GPA = grade point average; all values are significant at p < .05; asterisks indicate data were not significant; data from the 1996 Cooperative Institutional Research Program freshman survey and the 2000 College Student Survey.

*The coefficient for any variable not yet in the equation shows the beta that variable would receive if it were entered into the equation at the next step.
though all forms of interaction focused on academic issues generally, different faculty measures in this study did not benefit male student athletes equally. Discussing coursework with faculty outside of class, for example, may speak more to male student athletes who have challenges with balancing their athletic commitments coupled with academic requirements and other scholarly expectations than others. Such a finding is not surprising, because students generally tend to seek assistance with their studies when they are not doing well academically.

Given the relationship between academically oriented interactions and student athletes’ success, these findings have important implications for programs to assist college and university-level student athletes in improving their academic performance. Beyond that, this study argues for institutions encouraging a wide range of faculty communication and mentoring responsive to the needs of male student athletes of different abilities. When designing such programs, attention should also be given to the practices of the specific academic support programs at hand and how they can potentially affect student athletes who enter the institution with differing educational characteristics. Because some student athletes enter college performing at lower academic levels than their peers, faculty advisors, and administrators must be well advised to appreciate their situation and work closely with these students in identifying factors that may impede or facilitate their academic talent development and/or self-identity. Furthermore, because the quality and nature of formal and informal communication and faculty interactions with student athletes is also essential to both academic achievement and overall college experience, mandatory academic and social activities (e.g., research projects, faculty attendance at sporting events and team lunches, etc.) between student athletes and faculty members should be encouraged (Comeaux and Harrison, 2001; Milem & Berger 1997; Pascarella et al., 1983). In doing so, faculty members, or the “intellectual” as mentor, will become more exposed to the culture of this student population and begin to cultivate meaningful relationships. Duderstadt (2000) described the “intellectual” as mentor in the following:

While the present study produced useful findings and has implications for institutional practices pertaining to student athletes, it is not without limitations. These data sampled both NCAA Division I and II football and basketball student athletes and, therefore, may not reflect institutions with different admission standards and academic expectations for its student athletes. Furthermore, the sample is not random. Thus, generalizations from this study should be made with caution and consideration of these factors.

The lack of causal direction among the environmental measures and the dependent variable was another limitation of this study. That is, do student athletes who interact with faculty, depending on the form of interaction, receive higher grades, or is it that those with higher grades are more likely to pursue interaction or contact with faculty? Future qualitative studies that explore student athletes’ experiences with faculty inside and outside the classroom might be successful in answering such uncertainties. Additionally, the voices of student athletes are critical to addressing this issue at both the theoretical and practical level (Benson, 2001). Future investigation should also examine other environmental variables both in high school and college (e.g., peer interaction, student support services, etc.) that may influence and further explain college GPA.

The results obtained from this research will be most useful to faculty who are exposed to the sport model and its constraints, as they attempt to empower student athletes in American higher education. In the final analysis, faculty should not necessarily treat student athletes differently from traditional students. Rather, faculty should be cognizant of their role as mentor and use this role as an opportunity to cultivate in students the best that academics and sport offers: dedication, commitment, perseverance, and teamwork.

References


Note

1. All betas are reported after the final step.

Authors’ Note

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E-mail: ecomeaux@ucla.edu
### Appendix A. Student background and involvement characteristics

<table>
<thead>
<tr>
<th>Block</th>
<th>Variables</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td>Background measures</td>
<td>Self-report, A, B, etc.</td>
</tr>
<tr>
<td>(input)</td>
<td>Average high school grades</td>
<td></td>
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<tr>
<td></td>
<td>Socioeconomic status</td>
<td>Mother’s education</td>
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<td></td>
<td></td>
<td>Father’s education</td>
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<td></td>
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<td>Parental income</td>
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<td></td>
<td>Race (dichotomous measures)</td>
<td>White/Caucasian</td>
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<td>Black/African American</td>
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<td>Interaction with faculty (high school)</td>
<td>Asked a teacher for advice after class</td>
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<td></td>
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<td>Was a guest in a teacher’s home</td>
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<td></td>
<td></td>
<td>Talking with teacher outside of class</td>
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<tr>
<td>Block 2</td>
<td>Institutional type and control</td>
<td>Public</td>
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<tr>
<td>(environment)</td>
<td>(dichotomous measures)</td>
<td>Private</td>
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<tr>
<td></td>
<td></td>
<td>University</td>
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<td></td>
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<td>4-year college</td>
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<td>Block 3</td>
<td>Interaction with faculty (college)</td>
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<td>(environment)</td>
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<td>Faculty provided intellectual challenge and stimulation</td>
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<td>Faculty provided negative feedback about academic work</td>
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</tbody>
</table>

1. Eight-point scale: 1 = D, 2 = C, 3 = C, 4 = B, 5 = B, 6 = B+, 7 = A, 8 = A+.
2. Eight-point scale: 1 = grammar school or less, 2 = some high school, 3 = high school graduate, 4 = postsecondary, 5 = some college, 6 = college degree, 7 = some graduate, 8 = graduate degree.
3. Fourteen-point scale: 1 = less than $6,000; 2 = $6,000–$9,999; 3 = $10,000–$14,999; 4 = $15,000–$19,999; 5 = $20,000–$24,999; 6 = $25,000–$29,999; 7 = $30,000–$39,999; 8 = $40,000–$49,999; 9 = $50,000–$59,999; 10 = $60,000–$74,999; 11 = $75,000–$99,999; 12 = $100,000–$149,999; 13 = $150,000–$199,999; 14 = $200,000 or more.
4. Dichotomous measure: 1 = no, 2 = yes.
5. Three-point scale: 1 = not at all, 2 = occasionally, 3 = frequently.
6. Eight-point scale in hours: 1 = none; 2 = less than 1; 3 = 1–2; 4 = 3–5; 5 = 6–10; 6 = 11–15; 7 = 16–20; 8 = over 20.