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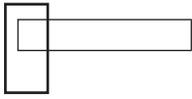
2011

A Conceptual Model of Academic Success for Student-Athletes

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A Conceptual Model of Academic Success for Student–Athletes

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Concern over the academic talent development of Division I student–athletes has led to increased research to explain variations in their academic performance. Although a substantial amount of attention has been given to the relationship between student–athletes and their levels of academic success, there remain critical theoretical and analytical gaps. The purpose of this article is to develop a conceptual model to understand and explain the cumulative processes and characteristics—as a whole and in stages—that influence academic success for Division I student–athletes. Research on student–athletes and academic success is reviewed and synthesized to provide a rationale for the basic elements of the conceptual model.

Keywords: achievement; cultural analysis; higher education; intercollegiate athletics; learning environments; multiculturalism; student development

Intercollegiate athletics are an integral component of life at many colleges and universities. Despite their relatively small representation on college campuses, Division I student–athletes occupy a socially prominent space, whether as the subject of controversy or of celebration. They provide publicity to their universities and entertainment to the community, and they help develop and instill school pride (Sylwester & Witosky, 2004). Although the institutional benefits of college athletics are generally accepted, concerns over the academic and personal development of student–athletes have surfaced over the past decade. Division I student–athletes in general continue to show lesser forms of academic success than their nonathlete counterparts (Eitzen, 2009), and yet the reasons that they struggle academically more often than their nonathlete peers are not well understood.

To advance our knowledge of Division I student–athletes, scholars have conducted a considerable amount of research in an effort to shed light on the complicated variations in their academic performance. Much of this work has attempted to relate these variations to demographic, precollege, and social factors (Bowen & Levin, 2003; Pascarella, Edison, Hagedorn, Nora, & Terenzini, 1996; Ryan, 1989; Sellers, 1989, 1992; Shulman & Bowen, 2001). Some studies have suggested that differences in

academic performance are influenced by college environmental characteristics such as purposeful engagement activities (Comeaux, 2005; Gaston-Gayles & Hu, 2009; Pascarella et al., 1999; Stone & Strange, 1989; Umbach, Palmer, Kuh, & Hannah, 2006), whereas other studies reveal that noncognitive characteristics influence the variation in academic achievement (Gaston-Gayles, 2004; Parham, 1993; Petrie & Russell, 1995; Simons, Van Rheenen, & Covington, 1999).

Although the results of these studies begin to help us understand the forces supporting and the obstacles confronting student–athletes' academic success, much remains unknown about these issues. That is, there remain analytical gaps constraining the ability of student affairs leaders, particularly academic advisors and counselors, to explain, not simply to describe, how certain factors influence student–athletes' academic success. A simple comparison of certain desired outcomes among individuals with differing abilities and social status characteristics is insufficient. Previous studies have neglected to clearly delineate the multiple characteristics and cumulative processes that influence varying forms of academic success for student–athletes. Some studies, for instance, have failed to distinguish between the influence of sport commitment, educational expectations, campus climate issues, and academic engagement practices on student–athlete academic success. Failure to distinguish between these multiple influences on academic success has frequently led to assumptions about student–athletes that too often present them through a deficit lens. These assumptions to some extent have a significant impact on the types of assistance that student affairs leaders provide student–athletes for undergraduate completion (Comeaux, 2007). To remedy these shortcomings, a theoretical model that connects a set of individual and college environmental characteristics to educational outcomes is imperative.

A theoretical model devoted exclusively to Division I student–athletes can lead to an understanding of their processes of interaction within the college environment. Such models do exist for their nonathlete peers, and these models are critical because they take into account notions of academic and social integration, which research has shown are essential to persistence in higher education (Astin, 1993a; Tinto, 1975). The failure to fully understand the distinct experiences of college student–athletes can have a significant impact on the extent to which we understand the need for specific forms of campus assistance and can affect questions of policy in higher education. The National Collegiate Athletic Association (NCAA), for example, implemented the Academic

Progress Rate as an accountability measure for student-athletes' academic performance. This measure places the onus on colleges and universities to police themselves and to understand the extent to which, and conditions under which, environmental factors such as sport demands and campus involvement patterns affect the overall college experience of student-athletes.

Although colleges and universities offer a myriad of support services and programs for student-athletes, they have not managed to consistently and effectively enhance student-athletes' learning and personal development (Comeaux, 2007; Hinkle, 1994). Rather, many support centers focus on simply maintaining academic eligibility (Knight Foundation Commission on Intercollegiate Athletics, 2001), which clearly creates an athletic subculture of low academic expectations, thus reducing the possibilities for developing high-achieving student-athletes (see Mahiri & Van Rheenen, 2010). This dire situation leads us to seek a better understanding and explanation of the cumulative processes and characteristics that increase the likelihood of academic success for student-athletes.

In this article, we develop a conceptual model of academic success for Division I student-athletes in general. The goal of this model is to explain the longitudinal process of interactions that lead to varying forms of student-athlete academic success, broadly defined as student-athlete matriculation¹ and graduation from a program of study. To do this, we first explore the student-athlete experience to understand the extent to which the athletic subculture, the increasing commercialization of college sports, and academic engagement practices might influence these students' overall academic success. Next, we discuss the design and function of the conceptual model. We follow with a review of the literature on student-athletes and academic success to provide a rationale for the substance and various elements of the model.

The Student-Athlete Experience

College student-athletes have distinct variations (e.g., revenue vs. nonrevenue sports; ability, race, gender) in intercollegiate athletics. Because of this heterogeneity, student-athletes cannot easily be classified into simple categories. The focus of this section, then, is on understanding student-athletes as a nontraditional student group and, specifically, on how various forces such as the athletic subculture influence their academic success.

Broadly speaking, Division I student-athletes face all of the challenges experienced by other students in the general population with regard to social and academic adjustment to college. Student-athletes, however, have added demands imposed by their sports, which create considerable challenges to student life (Howard-Hamilton & Watt, 2001; Jolly, 2008; Watt & Moore, 2001). College coaches expect a great deal of their players' time to be spent on sports, with practices, travel, team meetings, and midweek game schedules. Student-athletes often spend more than 40 hours a week on sport-related activities, not to mention the mental fatigue, physical exhaustion, and nagging injuries that afflict those who participate in college sports (Eitzen, 2009; Wolverton, 2008). As a result, student-athletes have less time available for their academic pursuits and other educationally productive activities. Whether by choice or heavily influenced by the athletic structure, student-athletes also live, eat, study, and socialize together and are even tracked into the same majors,

which leads, in part, to academic and social isolation from the rest of the campus community (Jayakumar & Comeaux, 2011; Shulman & Bowen, 2001). Unlike other students, student-athletes as a nontraditional group are burdened with many demands resulting from the existing structure of intercollegiate athletics that pose challenges to their academic success and the overall quality of their college experience.

Furthermore, college sports have increasingly become a popular form of mass commercial entertainment (Duderstadt, 2000; Gerdy, 2006). The total revenue received by the NCAA (2011) for the fiscal year ending in 2011 was \$757 million. As a consequence of the commercialization and high-stakes investment in athletics, there is a greater urgency to produce winning seasons and secure corporate sponsors at the expense of student-athletes' academic goals (Eitzen, 2009; Sack, 2001). Misplaced priorities have created barriers to their learning and personal development, and calls for reform (e.g., Benford, 2007; Bowen & Levin, 2003; Gerdy, 2006; Knight Commission on Intercollegiate Athletics, 2010; Meyer, 2005; Thelin, 1994) have been made from inside and outside of colleges and universities. Although striking the proper balance between academics and athletics remains of grave concern amid an athletic subculture that more closely resembles a business model, those who provide academic support services to student-athletes are now pressured to develop new strategies that apply student-athletes' competitive spirits beyond the game and into the classroom (Comeaux, 2010a; Harrison & Boyd, 2007; Hinkle, 1994).

Discovering meaningful and effective mechanisms to engage students (athletes and nonathletes alike) in an increasingly multicultural and diverse society is indeed a tremendous challenge for student affairs leaders. Historically, student affairs departments have produced narrowly tailored programs and services that do not support or affirm cultural differences and that thereby limit the full participation of certain student groups (Comeaux, 2007). More contemporary conceptions of culture are often linked only to racial or ethnic identity, leading to monolithic judgments about entire groups and a growing cultural disconnect between student affairs leaders and the student-athlete population (Hood, 2004; Rueda, 2004). Culturally relevant curricula and engagement practices that reflect and benefit all students are imperative (Ladson-Billings, 1995). Student affairs leaders need to forge deeper and more authentically responsive strategies that are effective with student-athletes across multiple lines of differences. New and creative approaches, such as critical teaching and learning through popular culture, can facilitate students' critical academic and psychosocial talent development while simultaneously connecting them to relevant issues in different social contexts (Duncan-Andrade, 2010; Mahiri, 1998; Morrell & Duncan-Andrade, 2002).

C. Keith Harrison (1995, 2002), for example, cofounder of the Scholar-Baller (SB) program, introduced the Scholar-Baller paradigm primarily, though not exclusively, in response to glaring concerns about the lack of responsive intervention strategies to improve student-athlete academic success and social integration in the college setting. The SB team—composed of educators, practitioners, researchers, professional athletes, and entertainers—works with participating colleges and universities to help student-athletes create compatible and affirming

identities as both students and athletes (Harrison & Boyd, 2007). Culturally relevant curriculum training, pretest and post-test evaluations, and supplemental materials (e.g., reward incentives for academic excellence) are provided to participating colleges and universities.

The SB curriculum in particular was designed for academic support services, and as such, it considers the experiences, values, and cultural orientations of student-athletes in order to foster more positive learning environments and desirable outcomes. For example, the unit “Self Identity and Social Identity” seeks to assist student-athletes in developing stronger levels of self and social identity throughout their college experiences and beyond. In this unit, student-athletes engage in various self-exploration activities, in part through popular culture texts, hip-hop culture and music, video, fashion, language, and other mass media artifacts.

The use of popular culture increases students’ motivation but, more important, enables them to reflect meaningfully on their lives and engage in consciousness-raising discussions. The point of such activities is to use popular culture as part of a larger process of connecting student-athletes to relevant issues and giving them ownership of their learning, as well as including student-athletes in liberating activities that will help them develop critical and analytical skills (Morrell, 2002). In many ways, SB not only serves as a counterpedagogy to traditional ways of thinking and knowing but also appropriately offers possibilities for academic and critical literacy development among increasingly diverse student-athlete populations.

As a result of its pedagogy of inclusion, SB has produced more favorable outcomes in student retention and academic achievement (see Steinbach, 2004). In a narrative study, Harrison (2004), for instance, examined Division I football student-athletes to understand their attitudes toward the SB curriculum and toward the reward incentives for academic excellence, each of which they received. Both empowered student-athletes to work toward more balanced academic and athletic identities over the course of their undergraduate programs.

In sum, it is clear that the athletic demands placed on student-athletes and the types of engagement activities provided for them influence their learning and personal development. With the heightened commercialization of intercollegiate athletics, colleges and universities must recognize that the level of academic investment among college coaches and other internal stakeholders who frequently interact with student-athletes can influence their success and life goals. Likewise, attention should be given to the types of intervention strategies facilitated by academic support services and to how they can potentially affect student-athletes who enter higher education institutions with different cultural backgrounds (Comeaux, 2010a). Such intentional actions can maximize the degree to which students successfully participate in the athletic, social, and academic systems of college. Further, these isolated studies and culturally relevant tools are helpful in shedding light on the experiences of student-athletes. Nevertheless, we continue to lack a clear conceptual model that brings together what we have learned about their experiences on college campuses. A conceptual model of student-athletes’ academic experiences can fill that information gap.

Structure of the Conceptual Model

Influential theoretical models designed to help us understand and explain student-athlete academic success are scant. Most scholars and student affairs leaders rely heavily on existing theoretical models based on the general student population to predict the behaviors and outcomes of student-athletes in college. But student-athletes have unique campus involvement patterns and other defining characteristics, and as previously discussed, they require models devoted exclusively to their social processes and college success. Through an extensive literature search, we discovered one conceptual model related to student-athletes, designed by Althouse (2007). Althouse did not examine the relationship between student-athletes and academic success specifically, although he did attempt to delineate more clearly the important socialization factors of the student-athlete. To do so, he tested a model of first-semester Division I student-athletes’ academic motivation and motivational balance between academics and athletics. Using background variables, high school academic variables, college situational variables, and noncognitive variables, Althouse found that high school grade point average (GPA), parent level of education, and culturally relevant educational experiences outside of school were positively associated with motivational balance between academics and athletics.

Although this model advances our knowledge base regarding a series of variables relevant to student-athlete academic motivation, it does have shortcomings—namely, inadequate explanation of and attention to the full ranges of characteristics and cumulative processes within the college environment that influence student-athlete academic success. It would be instructive, for instance, to know the correlation between academic motivation and academic performance. Nonetheless, the work of Althouse (2007) helps to inform our conceptual model because of his attention to noncognitive variables.

Our proposed conceptual model—presented in Figure 1—offers a culturally inclusive approach, applying the SB paradigm (discussed earlier) to influence student-athlete academic success at Division I institutions. The application of SB alone to student-athletes’ undergraduate programs of study does not explain their academic success, however. Rather, there are multiple factors and cumulative processes at play, and it is our intention to present a conceptual model that takes the full range into account. As such, the model presumes that a student-athlete’s academic success will be based primarily on a set of individual characteristics and dispositions, with effects from the social and academic systems within which the student-athlete operates.

Individual *precollege characteristics* are used in most broad student success models (Bean & Metzner, 1985; Spady, 1970; Tinto, 1975) because they are likely to predict certain behaviors in college (Astin, 1993a). In this case, individual attributes (e.g., race, gender, academic motivation), family background (e.g., parental/guardian level of education, degree of parental/guardian support), and educational experiences (e.g., high school context) comprise the first stage. Each of these characteristics has indirect effects on college academic success for student-athletes. Moreover, precollege or input characteristics (i.e., family background, educational experiences and preparation, and individual attributes) in the first stage of the conceptual model, as diagrammed in Figure 1, interact with each other and are likely to

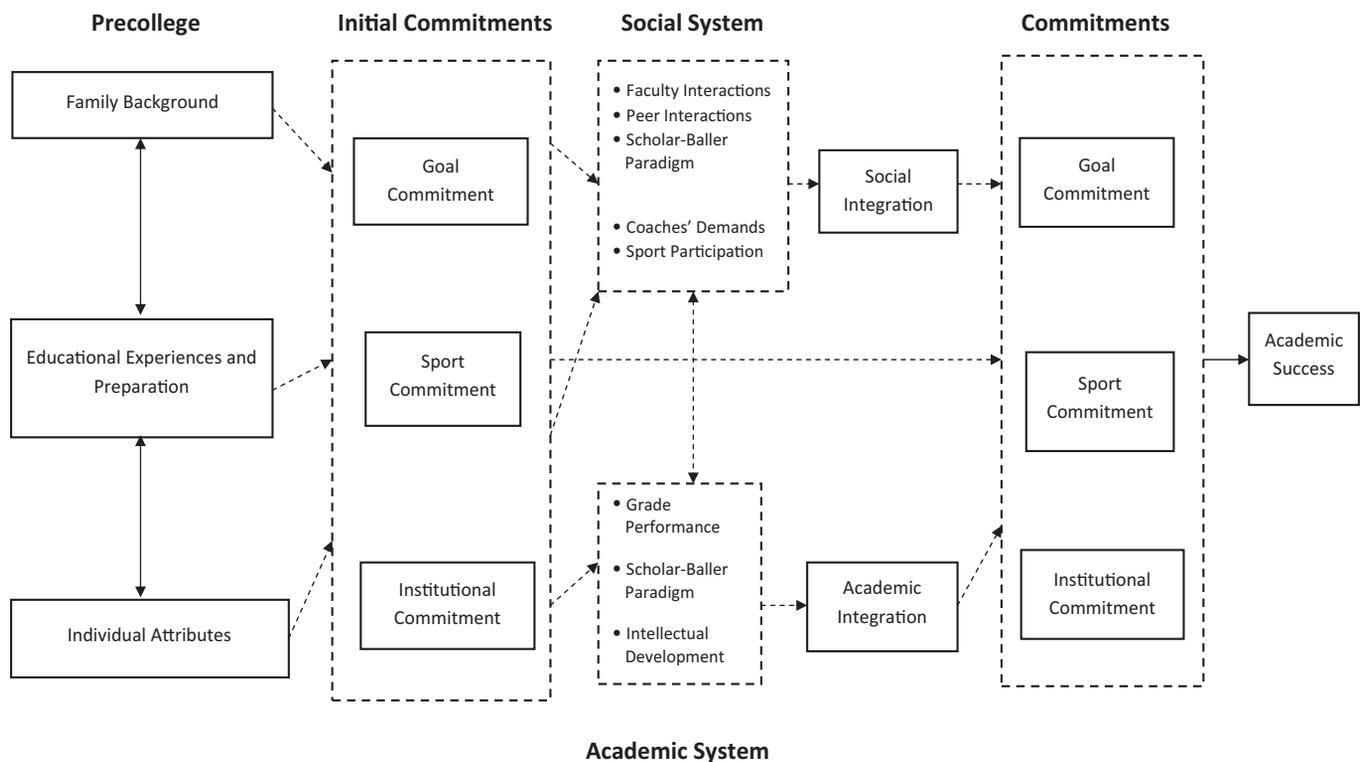


FIGURE 1. Model for college student-athlete academic success.

influence initial goals and success, as well as commitment to one's sport and institution.

Commitments (i.e., goal, sport, and institutional) are positioned both after the precollege characteristics and toward the end of the current model, demonstrating the interaction process between student-athletes' precollege characteristics and the college setting.² With respect to the second stage of the model, initial *goal commitment* is a relevant characteristic because it helps to identify the behaviors that student-athletes bring into the college setting. Such behaviors are predictors of how they will interact within the college environment. According to Bean and Metzner (1985), measures of initial goal commitment include (but are not limited to) students' educational plans and the highest level of college education to which they aspire. For example, a student-athlete who, at the time of matriculation, aspired to earn a doctoral degree would be seen as more likely to complete a 4-year degree than another student-athlete whose expectation was to obtain a bachelor's degree.

Likewise, initial *institutional commitment* and *sport commitment* are integral components of the second stage of this conceptual model. The former is defined as a student-athlete's expectation of satisfaction with the institution and the degree of importance ascribed to completing his or her undergraduate degree at the institution (Tinto, 1975). The latter is the amount of physical and psychological time and energy that a student-athlete devotes to his or her sport. Other factors being equal, one would expect, for example, that a student-athlete with a high institutional commitment would be more likely to achieve academic success than one who has a low commitment to the institution. Similarly, one would anticipate that a student-athlete

with a relatively higher sport commitment would be less engaged in educationally purposeful activities than one whose commitments lay elsewhere. Sport commitment is particularly relevant to the model because of the incredible demands of participation that can diminish the goal and institutional commitments of student-athletes (Eitzen, 2009; Jayakumar & Comeaux, 2011; Sack, 2001).

Like individual and commitment characteristics, *college environmental factors* are an essential component of student-athletes' experiences. The college environment is complex and encompasses both academic and social domains. It is important for student-athletes to integrate sufficiently in both domains if they are to matriculate and graduate. These students should be mindful of their time spent in each area. According to Tinto (1975), "one would expect a reciprocal functional relationship between the two modes of integration such that excessive emphasis on integration in one domain would, at some point, detract from one's integration into the other domain" (p. 92).

The degree to which student-athletes are able to integrate into their campus environments varies from individual to individual, depending on the level of positive self-identity and the extent to which integration—social and/or academic—is personally relevant to their collective experiences. That is, student-athletes encounter new ideas, values, and norms as they navigate their college careers. Based on those encounters, they may seek out, adopt, and/or reject environments that are similar to and/or different from their home cultures or lived experiences in terms of norms, values, and behaviors (Hall, 1992; Milem & Berger, 1997). How they negotiate and respond to these ongoing encounters is critical to their academic success in college.

Finally, the prevailing norms and behavior patterns of the college or university community are also a key piece of the equation. Such factors as systemic racism, administrative policies and decisions, institutional size, and forces beyond the institution must be taken into account in this model (Astin, 1993a; Brooks & Althouse, 2007; Davis, 1995; Duderstadt, 2000; Eitzen, 2009). The extent to which student-athletes are able to adjust to these factors will likely influence their academic and social integration.

In light of these factors, the present conceptual model has two factors primarily related to student-athlete matriculation and academic success: (a) the individual characteristics of student-athletes, which include their precollege characteristics and evolving commitments to the institution, educational goals, and sport, and (b) the degrees and types of student-athletes' interactions with the college environment (identified in the model as the social and academic systems). Accounting for precollege characteristics and commitments, the model posits that it is the student-athlete's integration into the academic and social environments of college that is strongly associated with varying forms of academic success. Hence, it is conceivable that the more frequent the interactions of a student-athlete with his or her college environment, the greater the commitment will be to the institution and to college success. In this sense, the model has roots in Tinto's interactionalist model of attrition, particularly his central idea of "integration."

In line with Tinto's (1987) student-attrition model, student-athletes' grades, intellectual development, and engagement with the SB curriculum increase the likelihood of academic integration. Academic integration is expected to influence goal, sport, and institutional commitment and, ultimately, academic success. In the social domain, peer group interactions, faculty interactions, the SB curriculum, and other social interactions result in social integration. Social integration is likely to influence goal, sport, and institutional commitment and, ultimately, academic success. Likewise, student-athletes' participation in sport-related activities such as team practices and games results in social integration. This type of social integration is likely to affect goal, sport, and institutional commitment and, ultimately, academic success either positively or negatively.

We now turn our attention to a more thorough review of the literature on student-athlete academic success. In particular, we look more closely at the particular variables presented in our conceptual model, providing a rationale for the inclusion of each. Reiterating the model's consistency with theory and the findings from existing studies on student-athletes and academic success provides evidence of its validity and utility and may assist in the design of future theoretical and empirical research on student-athletes, their interaction patterns within the college setting, and the degree of their subsequent academic success.

Success Among Student-Athletes: Synthesis of Recent Research

The present conceptual model includes selected input (precollege) and environmental characteristics and dispositions because they have been shown to specifically influence student-athletes' academic achievement at Division I institutions (Comeaux, 2005). Each of these aspects is explored in greater detail in this section.

Precollege Characteristics

Students enter college with a host of attributes and lived experiences that directly and indirectly influence their college experiences. It has been documented that among the most significant input or precollege characteristics associated with college success are family background, educational experiences and preparation, and individual characteristics (Astin, 1993a; Sellers, 1989). *Family background* characteristics influence students' expectations about college as well as their likelihood of interacting in college environments and thus must be taken into account in any model of the student socialization process (Astin, 1993a; Lang, Dunham, & Alpert, 1988). Among all family background characteristics, socioeconomic status (SES), parent level of education, and degree of parental/guardian support are perhaps the most important. The empirical studies described in this section indicate a positive relationship between family characteristics and college success, which is integral to this first stage in the conceptual model.

Sellers (1992) studied Division I student-athletes at 4-year colleges and showed that family SES—defined as a composite of mothers' and fathers' educational attainment, as well as students' estimates of their parents' incomes—is associated with academic success. Specifically, student-athletes from higher SES families showed a greater likelihood of academic success than student-athletes from lower SES families. Other studies have documented that the quality of relationships within students' families and the degree of parental/guardian support and expressed interest in students' well-being are also important factors in later academic success (Sedlacek & Adams-Gaston, 1992; Stevenson, 1999). In the current model, it is expected that the family's support and expectations of college are as vital to the student-athlete's success as the student-athlete's own expectations about his or her future.

Precollege *educational experiences and preparation* also relate to college performance. In particular, a student's high school GPA is a strong predictor of academic achievement in college (Astin, 1993a, 1993b; Comeaux, 2005; Sellers, 1992). In a quantitative study of student-athletes at Division I institutions, Comeaux (2005), using data from the Cooperative Institutional Research Program (CIRP), found in part that high school GPA has a substantial positive relationship with future college success. In this model, although precollege experiences are not directly related to college success, high school GPA is expected to have a significant indirect effect on academic success because of its influence on college GPA (Astin, 1993a).

Structural inequalities in high school students' access to qualified teachers, culturally relevant curricula, clean and safe facilities, advanced placement classes, honors courses, and other college preparatory services directly and indirectly affect the students' high school GPAs and likewise their motivation, aspirations, and expectations of college (Ladson-Billings, 1995; Oakes, Rogers, Siler, Horng, & Goode, 2004; Solorzano & Ornelas, 2004). The playing field is indeed far from level when one compares the kinds of learning opportunities for students in high- and low-income communities (Kozol, 1991, 2005). This is another important component of the conceptual model because it is so closely tied to multiple aspects of student-athletes' precollege experiences.

Individual attributes are also associated with student–athlete academic success. Noncognitive characteristics such as academic motivation (Gaston-Gayles, 2004; Lang, Dunham & Alpert, 1988; Simons et al., 1999), academic self-concept (Sedlacek & Adams-Gaston, 1992; White & Sedlacek, 1986), mental health (Petrie & Russell, 1995; Sellers, Kupermine, & Wadell, 1991), and educational goals (White & Sedlacek, 1986) have all been shown to be related to academic performance. For instance, Simons and Van Rheenen (2000), examining Division I student–athletes, found that the noncognitive variables of athletic–academic commitment, feelings of being exploited, academic self-worth, and self-handicapping excuses were all associated with academic success.

In addition, the athlete’s sport, race/ethnicity, gender, and level of competition are all individual characteristics that have been found to be associated with academic success. For example, Eitzen (1988) reported that (a) the athletes in the men’s revenue-generating sports of football and basketball performed less well academically than other athletes, as measured by grades and graduation rates; (b) Black student–athletes tended to come from poorer backgrounds and were the least prepared academically; (c) female athletes exhibited academic preparation and performance similar to that of their nonathlete peers and considerably better than that of their male counterparts; and (d) the higher the level of competition (i.e., Division I, II, or III), the less likely the student–athletes were to compare favorably with their nonathlete peers. After more than 20 years, these findings remain consistent with those of current studies on the individual characteristics of student–athletes and academic success (Burnett, Peak, & Dilley-Knoles, 2010; Comeaux, 2005; Comeaux, Speer, Taustine, & Harrison, 2011; Eitzen, 2009; NCAA, 2009; Sellers, 1992; Simons et al., 1999).

In general, selected noncognitive measures seem to be strong predictors of academic success in college (Simons et al., 1999). In the present model, male football and basketball student–athletes as well as Black student–athletes are expected to exhibit lower levels of academic performance than their counterparts due to the comparatively poorer education provided for these groups at the secondary level (NCAA, 2009; Sellers, 1992). Revenue-generating student–athletes likewise tend to have less balanced academic and athletic identities compared with non-revenue-generating student–athletes (Adler & Adler, 1991; Comeaux et al., 2011). Female student–athletes, however, have a substantial positive relationship to academic success, although there is little extant research on this group (Burnett et al., 2010; Pascarella et al., 1999; Simons et al., 1999).

Levels of Commitment

After considering the precollege characteristics of student–athletes, it is important to understand their commitments to various aspects of their lives—namely, to their academic success, their sports, and their institutions. Because these goals may develop and shift over time, these factors appear twice in our theoretical model, first as student–athletes’ initial commitments and again later, after they have had the opportunity to interact with their campuses and peers, developing as student–athletes.

First, the model addresses student–athletes’ short- and long-term educational *goal commitments*. A student–athlete with an

educational plan to obtain a doctoral degree, for example, is more likely to matriculate and graduate than a student–athlete solely seeking a 4-year degree (Sedlacek & Adams-Gaston, 1992). In this model, the extent to which a student–athlete commits to the goal of college completion is directly related to academic success (Curtis, 2006). The need for continued research on short- and long-term educational goal commitments for student–athletes is clear.

Student–athletes’ goals are typically not singularly focused on academic achievements. On the contrary, these athletes are likely to have strong *sport commitments* as well. Findings from one study suggest that, in general, elite athletes develop a commitment to sport participation as they establish personal reputations and identities as athletes in their sports (Stevenson, 1999). In particular, in this study, the more respect and validation that elite athletes received from close family and friends about their athleticism, the more committed they were to their sport. Relationships within the family and even peer encouragement and praise also to some extent influenced the long- and short-term sport commitment of student–athletes (Sedlacek & Adams-Gaston, 1992). Moreover, Coakley (2001) asserted that elite athletes’ “relationships and identities figured prominently in how they set priorities and made decisions about sport participation” (p. 85). Likewise, Adler and Adler (1991), in a qualitative study over a 4-year period, discovered that male revenue-generating student–athletes transitioned into college life with feelings of optimism about their desired academic goals; however, within one or two semesters, they began to devalue the academic role because of sport demands and expectations that structurally inhibited their involvement in educationally purposeful activities. These impediments, coupled with the strong commitment of many student–athletes to their athlete roles, made it easier for these students to focus on becoming elite athletes at the expense of their academic futures. More recently, Potuto and O’Hanlon (2007) surveyed student–athletes from 18 Division I universities to understand their college experiences. The authors discovered that some student–athletes viewed themselves more as athletes than as students.

In spite of these studies, we still have a great deal to learn about the processes of interaction that lead to sport commitment in college. Nevertheless, it is clear that this is an important aspect of any theoretical model that attempts to explain student–athletes’ experiences in college. Establishing a commitment to college sports is an interactive process that involves to some extent an evaluation of the student–athlete’s own attitude and abilities for athletic success over time (Coakley, 2001). In addition, an athletic subculture that includes coaches who are pressured to win at all costs might play a critical role in the sport commitment of student–athletes at many colleges and universities. The need for additional research that delineates individual characteristics to account for the variations in the types of sport commitment among college student–athletes is evident.

Institutional commitment, according to Tinto (1975), refers to the level of importance credited to completing one’s undergraduate degree at a given institution. In this model, it is plausible that a student–athlete who, at the time of matriculation, demonstrates a high institutional commitment will be seen as likely to achieve academic success. Unfortunately, previous research has

not controlled for institutional commitment when examining student–athletes, unlike studies on other students. Thus, there is a need for research on the relationship between institutional commitment and academic success for student–athletes attending Division I institutions.

Environmental Characteristics: Social and Academic Systems

Like precollege characteristics and commitments, matriculation and graduation are the results of a longitudinal process that includes interaction in the school environment. When considering precollege characteristics and initial goal, sport, and institutional commitments, we recognize that student–athletes' academic success may also be affected by the extent to which they have integrated into the academic and social environments of the college. We chose to include environmental characteristics in the model because previous research has demonstrated the vital role these characteristics play (Astin, 1993a; Hu & Kuh, 2002, 2003; National Survey of Student Engagement, 2005; Pascarella & Terenzini, 1991, 2005; Tinto, 1987). For example, purposeful engagement activities within the academic and social systems of college are associated with desirable college outcomes (Astin, 1993a; Pascarella & Terenzini, 2005). Pascarella and Terenzini (2005) found that the impact of college was largely determined by the degree to which students engaged in various in-class and out-of-class activities, such as preparing for class, interacting with faculty in and out of class, and learning how to work well with peers on problem-solving tasks and community service work (Kuh, 2001). In short, studies have revealed that the more time and energy students devoted to learning and the more intensely they engaged within the college environment both academically and socially, the greater their potential outcomes for achievement, satisfaction with the educational experience, and persistence in college (Astin, 1996; Pascarella & Terenzini, 1991). Hence, the degree of student–athletes' integration into both the social and the academic systems of college life is an essential aspect of this conceptual model.

Social integration. Social integration occurs primarily through student–athletes' engagement in campus extracurricular activities (other than their sports), interactions with faculty, and interactions with peers other than their teammates. Comeaux (2005), for example, used data from CIRP to reveal that the benefits accrued from relationships between faculty and student–athletes are to some extent contingent upon the specific nature of contact. More precisely, Comeaux found that student–athlete integration into the social domain (such as faculty assistance with achieving professional goals) accounted for modest significance in Division I student–athlete academic success. Likewise, Umbach and colleagues (2006), using data from the National Survey on Student Engagement, found in part that student–athletes did not differ from their nonathlete peers on participation in effective educational practices such as interaction with faculty and collaborative learning in the social domain.

More recently, Gaston-Gayles and Hu (2009) examined factors related to student–athlete engagement in educationally sound activities. Using a large-scale data set from the Basic Academic Skills Study, these researchers revealed that the extent to which student–athletes interacted with faculty did not significantly influence a set of desirable outcomes. In fact, the authors

found that, on average, student–athletes' interactions with students other than their teammates had positive impacts on personal self-concept as well as on learning and communication skills.

In accounting for background characteristics, the benefits of particular types of student–athlete and faculty interactions vary by race and, to a lesser degree, by gender (Comeaux & Harrison, 2006, 2007). For instance, using CIRP data, Comeaux and Harrison (2007) found minimal differences between Division I male and female student–athletes in their various forms of contact with faculty in the college social system. Faculty who provided letters of recommendation, encouragement for graduate school, and help in achieving professional goals made fairly strong contributions to both male and female student–athletes' academic success. In a survey of Division I student–athletes, Marx, Huffmon, and Doyle (2008) likewise found that male and female athletes varied in their socialization experiences. Furthermore, Comeaux and Harrison (2006) revealed differences between Division I White and Black student–athletes in their various forms of interaction with faculty. Faculty who provided help in achieving professional goals and assistance with study skills were positively associated with White student–athletes' academic success, whereas these variables were not significant for Black student–athletes.

It is worthwhile to note that while engagement in educationally sound activities such as student–faculty interaction contributes to desirable college outcomes, this relationship should be interpreted with caution. The campus involvement of Black student–athletes in particular is often grossly diminished. This is primarily the result of a hostile campus racial climate and reinforcement of low academic expectations by significant members of the campus community. These notions are well documented by previous studies on the college experiences of Black student–athletes attending predominately White institutions (Benson, 2000; Brooks & Althouse, 2007; Bruening, Armstrong, & Pastore, 2005; Comeaux, 2010b; Edwards, 1984; Hawkins, 1999; Lawrence, 2005; Perlmutter, 2003; Sailes, 1993; Singer, 2005).

In conclusion, it appears that the relationships that student–athletes establish with faculty and peers other than their teammates are directly related to academic success. Such relationships provide opportunities for mutual assistance and support as well as formal and informal communication regarding academic and personal goals. It is expected that meaningful relationships with peers who have strong academic orientations are likely to enhance rather than impede student–athletes' academic success. Moreover, interactions with faculty not only increase the social integration of student–athletes but also enhance their intellectual development (Umbach et al., 2006), a significant link to academic integration. In the current model, it is important to note that student–athletes exhibit less interaction through extracurricular activities and campus services because of sport demands that limit their participation in such activities (Eitzen, 2009; Wolverton, 2008). Nonetheless, the implementation of the SB curriculum and other effective culturally relevant tools through academic support services will increase the likelihood of student–athletes' motivation and engagement in the social and academic domains (Harrison, 2004).

Academic integration. Academic integration is measured in terms of student–athletes’ grades and intellectual development. According to Tinto (1975), grades can be viewed more as an explicit standard in institutions of higher education, whereas intellectual development is seen as an intrinsic form of reward and as an indicator of the student’s overall evaluation of the academic system. Thus, using cumulative college GPA as a measure of academic success, some studies have reported a positive association between athletic participation and academic success (Foltz, 1992; Lance, 2004; Maloney & McCormick, 1993; Sack & Thiel, 1985). Foltz (1992), for example, although his sample was not representative of all student–athletes, discovered that student–athletes performed at higher levels academically in the season of competition as compared with the off-season. Controlling for gender, Foltz also found that female student–athletes on average tended to perform better academically than their male counterparts. On the other hand, using a large NCAA data set, Scott, Paskus, Miranda, Petre, and McArdle (2008) found that the academic success of student–athletes—irrespective of division—was better during the off-season as compared with the season of competition. The negative effects were strongest among sports such as Division I football and baseball that required the most significant amount of time and energy during the season.

The evidence in general suggests that student–athletes’ intellectual integration into the academic domain is related to academic success (Astin, 1993a; Pascarella et al., 1996; Ryan, 1989). Pascarella and colleagues (1996), for instance, found that athletic participation was positively associated with gains in internal locus of attribution for academic success. This finding is consistent with work on other students who integrated into the academic domain (Astin, 1993a). Nonetheless, because the literature on student–athletes and intellectual development is scant, the need for additional research that delineates individual characteristics to account for the variations in effects of intellectual development on academic success is clear. Future research also should explore the extent to which and the conditions under which the intellectual campus climate and the changing goal, sport, and institutional commitments of student–athletes affect their intellectual development in the academic domain. Even in the absence of this additional inquiry, however, academic integration remains a critical component of our theoretical model of student–athletes’ academic success.

Conclusion

The primary objective of this article was to fill critical theoretical and analytical gaps in our understanding of student–athletes’ academic success at Division I institutions. We have done so through linkages between existing theoretical frameworks and a review of the literature on student–athletes and academic success. The structure of the conceptual model presented here is similar to others (e.g., Tinto, 1975), but the content is unique to Division I student–athletes. The model moves us closer to explaining the cumulative process—as a whole and in stages—that influence varying forms of academic success for student–athletes. Thus, the model provides a conceptual framework for understanding research on college student–athletes and also should serve as a guide for future analysis.

An important strength of the model is that it builds on a culturally relevant application, the SB curriculum, to increase

student–athletes’ motivation and engagement to learn inside and outside of the classroom. Implementing aspects of these developmental orientations in programs or curricula could ultimately aid in developing the academic and personal skills of college student–athletes. In all, the conceptual model builds on existing theoretical frameworks and literature that have empirical support; however, refinement of the conceptual model may be necessary when additional research on student–athletes and academic success becomes available.

The lessons learned as we engage in this difficult and yet important work on the student–athlete integration process can be meaningful for the development of environments that are more supportive and inclusive. Those who can benefit from this conceptual model include student affairs leaders, especially academic advisors and counselors who are committed to developing the academic talents of Division I student–athletes regardless of race, gender, or type of sport. Indeed, it is clear that all Division I student–athletes are not the same, and their interaction patterns might vary before and during college. Because student–athletes enter college with varying attributes and lived experiences, student affairs leaders might use this conceptual model when working closely with these students to scrupulously understand their cultural backgrounds and to identify factors that may impede or facilitate their learning and personal development. In doing so, student affairs leaders can adopt responsive intervention strategies such as the SB curriculum for student–athletes, both to circumvent any impediments the students encounter and to improve their integration in the college setting and beyond. These deliberate and intentional intervention strategies may translate into more empowered and engaged student–athletes who traverse the educational terrain seeking opportunities to compete in the classroom and in life.

NOTES

¹In this article, *matriculation* is defined as a process in which student–athletes make consistent, annual progress toward a degree. The goals of matriculation include (but are not limited to) ensuring that student–athletes (a) integrate successfully into the academic, social, and athletic systems of college; (b) complete their course requirements in a specific degree program; and (c) achieve their educational objectives.

²Tinto (1975) refers to the commitment variables at the beginning and the end of the model as input and process variables, respectively.

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Manuscript received February 23, 2011

Revision received May 27, 2011

Accepted June 6, 2011