An Assessment of Social and Academic Integration Among Track and Field Student-Athletes of the Atlantic Coast Conference

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“I can do all things through Christ which strengthened me.”
Philippians 4:13

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ABSTRACT

Investigations on retention and graduation often focus on the overall issue of student persistence. Research has identified two variables that consistently predict persistence: the student’s ability to integrate academically and socially, and the student’s commitment to degree attainment. There has not been an abundance of supporting research on the subject dealing solely with student-athlete’s integration and institutional and degree commitment. Therefore, there were two major purposes of this research. The first purpose was to examine the social and academic integration experiences of track and field student-athletes. The second purpose was to determine whether social and academic integration experiences will influence student-athlete’s institutional and goal commitment to member institutions of the National Collegiate Athletic Association Atlantic Coast Conference.

A survey instrument developed by Pascarella and Terenzini (1980), originally designed to measure the integration and institutional and goal commitment constructs of Tinto’s model of student departure, was administered to track and field student-athletes enrolled in member institutions of the Atlantic Coast Conference (ACC). Three-way Analysis of variance tests revealed significant mean differences in social integration and academic integration when measured by race. However, no significant mean differences emerged in social integration and academic integration experiences when measured by gender and classification. Additionally, no significant differences emerged in institutional and goal commitment when measured by gender, race, and classification.

Finally, hierarchical multiple regression revealed social integration and academic integration significantly influenced institutional and goal commitment when controlling for background characteristics. Therefore, the results of this study suggest that persistence efforts are applicable to student-athletes. Although student-athletes have a unique academic structure and face the intense athletic demands of competing at a National Collegiate Athletic Association (NCAA) Division IA level, it is important to foster social and academic integration experiences. Moreover, the benefits of positive student-athlete integration experiences will result in a positive interaction between institutional and goal commitment among student-athletes.
CHAPTER 1

INTRODUCTION TO THE STUDY

A growing acceptance of the importance of student retention has been reflected in an increase of research and policy reports seeking to better understand and address the forces that shape student retention in higher education (Tinto, 1993). This explosion of research has served to refine, supplement, and in some cases, challenge our understanding of the complex forces shaping student retention (Tinto, 1993). Can the same retention efforts be applied to student-athletes as well?

Intercollegiate athletics continues to have a deep-seated presence in American institutions of higher education. According to the National Collegiate Athletic Association (NCAA), there are now over 375,000 student-athletes participating in some form of intercollegiate sport NCAA (2004). Student-athletes receive many benefits from participating in sports, including having all or part of their tuition covered by athletic scholarships and grants; receiving specialized athletic academic advising and counseling; residing in special campus housing; and achieving psychosocial development in the form of learning teamwork, dedication, discipline, self-esteem, while improving health, conditioning, and energy levels (Zimbalist, 1999). Unfortunately, the academic persistence of the student-athlete is not as strong.

Investigations on retention and graduation often focus on the overall issue of student persistence; in other words, the degree to which an individual is repetitively and/or continuously enrolled at an institution of higher education in order to achieve his or her goal of eventual graduation. However, there are many variables that influence a student’s decision to continue or to leave college. Research has identified two variables that consistently predict persistence: the student’s ability to integrate academically and socially, and the student’s commitment to degree attainment (Astin, 1993; Bean, 1990; Berger & Milem, 1999; Cabrera, Castaneda, Nora, & Hengstler, 1992; Lamport, 1993; Pascarella & Terenzini, 1991; Tinto, 1993). However, some research indicates that integration might play different roles for different student populations (e.g., residential vs. commuters, traditional vs. nontraditional, dominant vs. non-dominant groups, males vs. females; Blecher, 2006; Guiffrida, 2003; Pascarella & Terenzini, 1991).

More recently, a national study of student-athletes regarding their experiences as college students found that student-athletes know their participation in varsity athletics means they miss
out on other aspects of college life, both curricular and co-curricular. Students also indicated they regret some aspects of college life that they miss (NCAA, 2005).

It appears that the presence and strength of academic and social integration and goal commitment decreases the probability of student-athletes withdrawing from school. Unlike the typical student, there are institutional and environmental variables that may work against the student-athlete’s attempts to integrate into the academic and social communities of the campus. Tinto (1993) describes such barriers to integration as incongruence and isolation. The student-athlete’s inability to integrate may be, in part, due to his or her capacity of managing athletics and academics, or inopportunity to participate in the social and academic life of the institution due to athletic commitments. Therefore, the focus of this study is to examine the integration process of student-athletes and their subsequent level of institutional and goal commitment.

**Problem Statement**

The concern about student persistence and student-athlete graduation rates represents the long-standing tension between the emphases placed on academic performance versus intercollegiate athletic program success. A voluminous body of research examines the relationship between postsecondary graduation and intercollegiate athletics. This research, however, has almost exclusively focused on how the graduation rate of student-athletes is affected by their participation in intercollegiate athletics programs (American College Testing Service, 1984; DeBrock, Hendricks, & Koenker, 1996; Pascarella, Bohr, & Terenzini, 1995). Moreover, relatively few empirical studies on student persistence are available that examine how participating on an intercollegiate team specifically affects institutional commitment and the goal of graduation.

Given the interest in the relationship between persistence and graduation, and the vast literature addressing intercollegiate athletics and academic performance, it is surprising that the combination of the two has produced so little empirical attention. In order to begin addressing this gap in the literature, the current research explores the relationship between student-athleticism and theories of student persistence by examining the impact social and academic integration has on the institutional and goal commitments of student-athletes.
**Purpose of the Study**

The purpose of this study is two-fold: (1) to examine the social and academic integration experiences of track and field student-athletes; and (2) to determine whether these experiences will influence student-athletes’ institutional and goal commitments to member institutions of the NCAA Atlantic Coast Conference.

**The Atlantic Coast Conference**

The Atlantic Coast Conference (ACC) is one of the oldest collegiate athletic leagues in the United States. The ACC was founded on May 8, 1953, with seven charter university members: Clemson, Duke, Maryland, North Carolina, North Carolina State, South Carolina, and Wake Forest. The seven ACC charter members had been aligned with the Southern Conference, but left primarily due to the league’s ban on postseason play. After drafting a set of bylaws for the creation of a new league, the seven schools withdrew from the Southern Conference on May 8, 1953 ACC (2005). The bylaws were adopted and the name became officially the Atlantic Coast Conference on June 14, 1953. On December 4, 1953, officials convened and admitted the University of Virginia. The first and only withdrawal of a member institution came in 1971, when the University of South Carolina became a member of the Southeastern Conference. The ACC operated with seven members until the addition of former Southeastern Conference member Georgia Tech from the Metro Conference, on April 3, 1978. The addition of Florida State University, also from the Metro Conference, on July 1, 1991, brought the total to nine. In 2003’s cycle of conference alignment, the ACC added three more members, all from the Big East: Miami, and Virginia Tech joined on July 1, 2004, and Boston College joined on July 1, 2005, as the league’s twelfth member ACC (2005). A description of each member institution appears in Table 1.
### Table 1

**ACC Member Institutions**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Location</th>
<th>Established</th>
<th>Joined ACC</th>
<th>School Type</th>
<th>Undergraduate Enrollment</th>
<th>Varsity Sports</th>
<th>NCAA Championships (excludes football*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston College</td>
<td>Chestnut Hill, MA</td>
<td>1863</td>
<td>2005</td>
<td>Private</td>
<td>9,019</td>
<td>31</td>
<td>2</td>
</tr>
<tr>
<td>Clemson</td>
<td>Clemson, SC</td>
<td>1889</td>
<td>1953</td>
<td>Public</td>
<td>13,959</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Duke</td>
<td>Durham, NC</td>
<td>1838</td>
<td>1953</td>
<td>Private</td>
<td>6,259</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>Florida State</td>
<td>Tallahassee, FL</td>
<td>1851</td>
<td>1991</td>
<td>Public</td>
<td>30,206</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Georgia Tech</td>
<td>Atlanta, GA</td>
<td>1885</td>
<td>1979</td>
<td>Public</td>
<td>12,360</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Maryland</td>
<td>College Park, MD</td>
<td>1856</td>
<td>1953</td>
<td>Public</td>
<td>24,876</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>Miami</td>
<td>Coral Gables, FL</td>
<td>1926</td>
<td>2004</td>
<td>Private</td>
<td>15,600</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Chapel Hill, NC</td>
<td>1789</td>
<td>1953</td>
<td>Public</td>
<td>16,278</td>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>Virginia Tech</td>
<td>Blacksburg, VA</td>
<td>1872</td>
<td>2004</td>
<td>Public</td>
<td>21,937</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Wake Forest</td>
<td>Winston-Salem, NC</td>
<td>1834</td>
<td>1834</td>
<td>Private</td>
<td>4,231</td>
<td>18</td>
<td>7</td>
</tr>
</tbody>
</table>
Significance of the Study

Academic and social integration have been shown to affect the persistence in college (Bean, 1985; Pascarella & Terenzinin, 1980, 1983). However, since most of the research has been conducted on traditional students, there is a need to address its applicability to student-athletes. The concept of enhancing student-athlete persistence can best be realized through the attention and understanding of student-athletes’ unique needs and concerns, which in turn affects future policy and practice within the academic and athletic community.

There is a need for a study that addresses the significance of fostering formal and informal interactions on campus among student-athletes. As cited in Napoli and Worthman (1998), Tinto’s theory holds that “student interactions with the social and academic environments of the institution are the principle determinants of educational goals and institutional commitment.”

There is a need for university and college administrators to develop insight into the institution’s commitment to the student as well as the student-athlete. According to Tinto (1987), an institution’s commitment to the student’s academic and social growth will result in increased student retention. Tinto stated that his model of institutional departure has been “structured to allow institutional planners to identify those elements of the institutional environment which may interfere with the progression of students until degree completion, allowing the institution to ask and answer the question, How can the institution be altered to enhance retention on campus?” (p.113).

The present study is geared toward motivating university administrators who are interested in the success of student-athletes and presenting them with an opportunity to explore and improve ways to integrate student-athletes into the academic and social systems of the institution. With attention focused on the successful integration of student-athletes, the likelihood of increasing graduation rates will have a significant impact on all student-athletes.

Theoretical Framework

This study is guided by Tinto’s (1993) Theory of Individual Departure. Tinto’s (1993) theory of departure is built on the earlier works of Emile Durkheim (1951) who examined the relationship between suicide rates and the social solidarity and integration of individual societies. Tinto borrowed from Durkeim’s study of suicide to guide the foundation of his theory of
departure from higher education. Tinto perceives both suicide and departure from higher education, which might be classified as a type of academic suicide, as similar in that both forms of behavior can be understood to represent a form of voluntary withdrawal from local communities that are as much a reflection of the community as it is of the individual who withdraws (Tinto, 1993). In the study of suicide, Durkheim sought to show how the principles of sociology could help explain why rates of suicide differed between countries and within countries over time (Durkheim, 1951). Specifically, he sought to demonstrate how understanding the character of the social environment (its social and intellectual or normative attributes) could be used to account for those variations in ways which other disciplines could not (Tinto, 1993). Tinto observed that Durkheim’s analysis could be utilized in a comparative study of the variation in rates of departure among different institutions of higher education.

Using suicide as an analogue for institutional departure from higher education, voluntary leaving may be thought of as a form of educational suicide because it highlights the ways in which the social and intellectual communities that make up a college come to influence the willingness of students to stay at that college (Tinto, 1993). Likewise, Durkheim’s work provides a way of understanding how colleges, composed as they are of differing social and intellectual communities, come to influence the leaving of their students (Tinto, 1993). Tinto’s theory defines individual departure as a student’s decision to remain or depart from institutions that result from a series of interchanges (integration) between that student and members of the college environment.

Theoretical Description

In describing the model, it should be noted, first, that the model is intended to speak to the longitudinal process of departure as it occurs within an institution of higher education. It focuses on the events that occur within the institution following entry and/or which immediately precede entrance to the institution (Tinto, 1993). Second, the model pays special attention to the longitudinal process by which individuals come to voluntarily withdraw from institutions of higher education. Third, the model is longitudinal and interactional in character. It emphasizes the longitudinal process of interactions that arises among individuals within the institution and can be seen over time to account for the longitudinal process of withdrawal or disassociation which marks individual departure (Tinto, 1993). Therefore, it is not a descriptive model of departure but an explanatory one. The model seeks to explain how interactions among different individuals within the academic and social systems of the institution and the communities, which
comprise them, lead individuals of different characteristics to withdraw from that institution prior to degree completion (Tinto, 1993).

**Theoretical Dimensions**

Tinto’s model contains six dimensions that explain how interactions lead individuals of different characteristics to withdraw from institutions prior to degree completion. Tinto begins his model with the first construct of *Pre-Entry Attributes*. “The model indicates individuals enter institutions of higher education with a range of differing family and community backgrounds as measured by social status, parental education, and size of community; a variety of personal attributes as measured by intellectual and social skills and abilities; and varying types of prior schooling experiences and achievements, for example, high school grade point average. Each attribute is posited as having a direct impact upon departure from college”(Tinto, 1993, p. 115).

The second construct is *Goals/Commitments*. Intentions or goals specify both the level and type of education and occupation desired by the individual. Commitments indicate the degree to which individuals are committed both to the attainment of those goals and to the institution into which they gain entry. Given the individual attributes and dispositions at entry, the third construct, *Institutional Experiences*, argues that subsequent experiences within the institution, primarily those arising out of interactions between the individual and other members of the colleges, student, staff, and faculty, are centrally related to further continuance in that institution. “Interactive experiences that further one’s social and academic integration are seen to enhance the likelihood that the individual will persist within the institution until degree completion” (Tinto, 1993, p. 116).

Integration is the fourth construct, and entails an individual’s academic and social integration within the campus environment. The model argues that the impact of integrative experiences has a direct effect on the continued reformulation of individual goals and commitments, the fifth construct. Positive integration serves to raise one’s goals and strengthens one’s commitments both to those goals and to the institution. Conversely, the model posits that “other things being equal, the lower the degree of one’s social and intellectual integration into the academic and social communities of the college, the greater the likelihood of departure” (Tinto, 1993, p. 116). Additionally, the fifth construct, *Goals/Commitments*, refers to subsequent intentions and goals set by the individual and commitment to a particular institution.

The sixth construct, *Outcome*, refers to the individual’s departure decision, whether to stay enrolled at the institution and persist until graduation or voluntarily withdraw. The model
speculates that external events may influence departure indirectly via their impact upon student social and academic integration and/or directly via their effect on commitments— the feeling of being “pulled away” (Tinto, 1993). This information is summarized in Figure 1.

Tinto (1993) Theory of Institutional Departure

**Figure 1.**

**Theoretical Connection to Investigation**

The major dimensions of academic and social integration are of primary importance to the model, and these constructs will guide this research study. Tinto wrote, “Given individual characteristics, prior experiences, and commitments…it is the individual’s integration into the academic and social systems of the college that most directly relates to his continuance in college” (1975, p. 96).

This theory provided insight into the present investigation because it maintains that college students who perceive their norms, values, and ideas as congruent with those at the center of the institution are more likely to become academically and socially integrated into the college. Those who perceive incongruence between themselves and the institution will
experience more difficulty becoming integrated and, therefore, are less likely to persist. The quality of student interactions is measured by perceptions of their experiences, and determines the level to which students are integrated into the collegiate environment. “Positive perceptions of educational and social experiences are indicators of integration and predict persistence (Cabrera, Castaneda, Nora, & Hengstler, 1992; Tinto, 1993). Negative perceptions, on the other hand, demonstrate a lack of integration, and increase the likelihood for early departure” (Tinto, 1993, p. 115). Furthermore, Tinto developed his model based on a sample consisting predominately of White students. There is no evidence to suggest that an adequate number of minority, nontraditional students, or student-athletes were included in the underlying premise of the model. Therefore, there stands a significant gap in the literature concerning the unique academic structure of the collegiate student-athlete and the association of student integration.

The importance of academic integration to academic performance was described by Pascarella and Terenzini (1983). The indicator of satisfaction with academic experience in college is constructed as an originating variable of academic integration (Cabrera, Nora, & Castaneda, 1993; Liu & Liu, 2000). Thus, these researchers believe that the commonality between integration and satisfaction is crucial to the success of academic performance and persistence (Liu & Liu, 2000).

Many other researchers have validated the descriptive power of Tinto’s model by operationalizing the key components of the theory and predicting departure decisions (Baumgart & Jonstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Liu & Liu, 2000; Mallette & Cabrera, 1991; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1979, 1980, 1983; Pascarella, Terenzini, & Wolfle, 1986; Smith, 2004; Terenzini & Pascarella, 1977; Terenzini, Pascarella, Theophilides, & Lorang, 1985; and Shaw Sullivan, 1997). This body of research confirms the connection between student integration and departure decisions.

Tinto’s theory of individual departure provides the impetus for this study in that Tinto posited that the more students felt a sense of connection with the social and academic climate of the institution, the higher likelihood they persisted toward graduation. Again, while his framework focuses on the general student population, there are unique challenges that student-athletes often face that may affect their ability to connect academically and socially on campus. “First, practice and competition can drastically limit the amount of free time student-athletes have available. Second, many athletic departments see themselves and are perceived by the members of the campus community as autonomous entities, curiously separated from the rest of
the university and quite closed to outsiders” (Ferrante, Etzel, & Lantz, 2002, p. 14). This study extends Tinto’s model by examining the connection between student-athletes’ perceptions of social and academic integration and their subsequent commitment to their current institution and the goal of graduation.

**Definition of Key Terms**

This research study is guided by the following conceptual definitions (the theoretical or dictionary definitions):

**Academic Integration.** Academic integration refers to an argument “that an individual’s integration can be measured in terms of both grade performance and his intellectual development during the college years” (Tinto, 1975, p. 104). Essentially, academic integration relates to the formal education of students (i.e., academic performance and faculty/staff interactions; Tinto, 1975)

**Goal and Institutional Commitment.** Goal commitment refers to the student’s commitment to the goal of earning a college degree while institutional commitment indicates the level of investment of a student has in a given institution (Tinto, 1987).

**Social Integration.** Social integration refers to the level and the degree of congruency between the individual and his or her social environment (e.g., extracurricular activities and peer-group interactions). Unlike academic integration, social integration relates to the informal education of students. It focuses on the students’ affiliations with peers, faculty, and staff that occur largely outside the academic realm of the institution (Tinto, 1975).

This research study is guided by the following operational definitions (the description of a variable or term in terms of a specific process):

**Athletic Commitment.** Athletic commitment refers to a student-athlete’s willingness to spend hours of mental and physical labor dedicated to the pursuit of an athletic goal. The desire and resolve to continue sport participation (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993).

**Degree Commitment.** Degree commitment refers to the strength of the individual student-athlete’s desire to attend a particular college or university with intentions to complete a college degree.

**Persistence.** Persistence refers to a student’s continuing enrollment toward degree attainment; opposite of departure or withdrawal.

**Retention.** Retention is a term used interchangeably with persistence, to suggest that a student is continuing his or her education in pursuant of an academic goal, usually graduation.
Student-Athlete. A student-athlete is a recruited or non-recruited student participating in an intercollegiate athletics program.

Delimitations of the Study

According to Creswell (2003), delimitations narrow the scope of a study. For the current study, first, data will be collected from the Institutional Integration Scales (IIS) developed by Pascarella and Terenzini (1980). The IIS is designed to measure the social integration, academic integration, and institutional and goal commitment dimension of Tinto’s model of student departure. Second, the IIS was administered during the late Fall 2006 semester and early Spring 2007 semester to a purposive sample of track and field student-athletes enrolled at universities in the Atlantic Coast Conference (ACC). The indoor track season begins in early January and continues through the outdoor season ending in late June. Administering the survey before the indoor season begins is most appropriate for coaches and athletes as to not to disrupt the competition season. Finally, the sample included participants from a mixture of different races/ethnicities, social classes, and nationalities and ranged from freshman to senior student-athletes. The population was chosen because of the researcher’s identity as a former track and field athlete and coach, and relationships with coaches in the conference.

Limitations of the Study

According to Creswell (2003), limitations identify potential weaknesses of the study. First, generalizations of the research findings will be limited to colleges and universities with a student body and a student-athlete body similar to those found in the ACC. The inability to generalize the findings to other college or and university populations outside the ACC will affect the study’s external validity. Second, the present investigation includes cross-sectional research, which presents the potential bias of selection differences between groups (McMillan & Schumaker, 2001). Third, the sport of track and field is as much an individual sport as it is a team sport (e.g., football or basketball); the individualization of the participants may have an impact on the social integration dynamics. Fourth, results based on purposeful sampling are difficult to generalize to other participants and results are dependent on unique characteristics of the sample (McMillan & Schumaker, 2001). Finally, the researcher did not distribute the surveys directly to the research participants. The findings of this study may be influenced by the use of volunteers and coaches and the homogeneous nature of the research participants.
CHAPTER 2

REVIEW OF LITERATURE

Overview

Within the existing literature, two variables that consistently predict persistence have been identified: the student’s ability to integrate academically and socially, and the student’s commitment to degree attainment. After an extensive review of the literature, the researcher discovered 40 database studies that highlight the integration process of collegiate student-athletes and student-athlete institutional goals and commitments. Within these studies three major themes emerged: (1) social integration and academic integration; (2) institutional and goal commitment; and (3) degree commitment and athletic commitment. Finally, this literature review concludes with a summary of the literature and offers a critical analysis of these specific studies addressing social and academic integration that may or may not affect institutional and goal commitment.

Social Integration and Academic Integration

In discussing this first theme, the researcher identified 25 studies addressing social integration and academic integration. Tinto (1993) postulated that the student’s inability to integrate into the social and academic life of the institution can be a significant factor in his or her inability to persist. Social integration into the campus communities may include developing close friendships, memberships in clubs and groups, informal relationships with faculty and staff, and attendance at social or cultural campus events. Academic integration into the campus community may include academic achievement (GPA, dean’s list, etc.), frequency of communications with advisors, formal communications with faculty and career counselors, memberships in majors clubs, and participation in study groups and internships (Tinto, 1993). Persistence in college requires individuals to adjust, both socially and intellectually, to the new and different environment of college (Tinto, 1993).

In an effort to bring some coherence to the research on student or institutional variables significantly related to withdrawal behavior, as well to provide a conceptual framework to guide future inquiry, Pascarella and Terenzini (1980) developed a multidimensional instrument that assesses the major dimensions of Tinto’s model (academic and social integration). In a longitudinal study conducted on 1,457 freshmen students at Syracuse University, the researchers
discovered the five institutional integration scales (peer-group interactions, interactions with faculty, faculty concern for student development and teaching, academic and intellectual development, and institutional and goal commitments) developed for this investigation increased correct identification of persisters and dropouts. The results generally supported the predictive validity of the major dimensions of Tinto’s model. Therefore, the performance of the five institutional integration scales suggest they may be useful in identifying potential voluntary dropouts of college students.

Fox (1984) extended the study performed by Pascarella and Terenzini (1980) by examining the psychometric characteristics of Pascarella and Terenzini’s instrument for urban students from lower socioeconomic (SES) backgrounds. Fox’s study provided results from two data collection sessions that were designed to provide some indication of the discriminant validity of the scales for the lower SES students. Data from Pascarella and Terenzini’s Institutional Integration Scales (IIS) was collected from two corresponding samples of 130 and 412 students enrolled in the Search for Education, Elevation, & Knowledge (SEEK) program at the City University of New York (CUNY). Results revealed anticipated reading comprehension problems with the IIS. Several items were revised and retested. The revised IIS scales were improved, as demonstrated by higher alphas and intercorrelations among the scales.

Guided by Tinto’s (1975) conceptual model of college student withdrawal, Blanco (1989) determined important factors in students’ decisions to persist and examined relationships of students’ perceptions of persistence factors. A total of 375 White, Black, and Hispanic degree-seeking students enrolled in three public two-year institutions in the state of Florida completed a questionnaire designed by the researcher. The results indicated that comfortability, convenience, benefits, and external influences were important to persistence. Comfortability was measured by the degree of comfort perceived by the student as a result of interactions with peers, faculty, and program staff in retention activities. Convenience was deemed as the frequency of retention activity meetings and the number of hours dedicated to the activity weekly. Benefits included such elements as financial aid, educational goals, performance, and retention activity program quality. External influences assessed the importance of employment and various “significant others” (i.e., friends, faculty/staff, college officials) that are outside of or beyond the retention activities themselves. Tinto’s model was useful in explaining students’ persistence/withdrawal behavior and illustrated that academic integration had a stronger influence on persistence decisions than did social integration.
The degree and quality of a student’s integration into the campus academic and social environment has been shown to have an impact on college persistence. In a study including 121 ethnic minority students, Griffin (1990) examined whether members of any one of the three organizational types (social, professional, or ethnic) perceived themselves to be more socially and/or academically integrated into university life than members of the other organizational types. Analysis of data obtained from the administration of the Academic and Social Integration Questionnaire (ASIQ) developed by the researcher revealed no significant difference in academic or social integration between members of all three groups. However, a second analysis found differences in social integration between members of professional and social organizations. Additionally, data confirmed members of social organizations perceived themselves to be more socially integrated into the university than did members of professional organizations.

Bers and Smith (1991) posited, “The degree to which students can experience or even seek academic and social integration with an institution may be influenced by their objectives and initial level of commitment to that institution” (p. 533). In a study examining the degree to which persistence of community college students can be predicted by social integration and academic integration, and/or by students’ educational objectives and their intent to persist, Bers and Smith found that students’ social and academic integration differentiated persisters from non-persisters. The researchers also examined whether Pascarella and Terenzini’s (1980) IIS, an instrument designed to operationalize the concept of academic integration and social integration with traditional students at four-year institutions, is applicable for students at two-year institutions. Additional results revealed students’ educational objectives and intent to re-enroll combined, and their pre-college characteristics and employment status, provide more insights into persistence than academic integration or social integration.

Research continues to expand in ways to predict college adjustment among students. Lavine (1992) administered Pascarella and Terenzini’s (1980) Institutional Integration Scales (IIS), Procidano and Heller’s (1983) Perceived Social Support From Friends and Family Scales (Pss-Fr & Pss-Fa), and Tracey and Sedlacek’s (1984) Non-cognitive Questionnaire (NCQ) to 278 University of Maryland-Baltimore County freshmen. The results provided little evidence that either pre-college academic ability or pre-college personal resources/social support were differentially predictive of future academic integration or social integration of Black and White students. Social support from friends was significantly related to academic integration of White
students. Black students reported more contact with faculty than Whites. For both groups, academic integration explained more variance in dropout intention than did social integration.

Persistence in college requires individuals to adjust, both socially and intellectually, to the new and different environment of college (Tinto, 1993). Ross (1992) focused on the constructs of academic integration and social integration, and how these could be used as measures of persistence among commuters, residential, academically high-risk, and low-risk students at Abraham Baldwin College (ABAC), a two-year residential college. Utilizing data gathered from Pascarella and Terenzini’s (1980) Institutional Integration Scales (IIS) among 739 students, results revealed social integration served as an estimate of the effect on persistence on residential students and those “not-at-risk” academically. Social integration had a negative effect on persistence among those “academically-at-risk.” Additionally, academic integration served as a greater estimate of effect for both commuting and developmental students.

As a means of exploring person-environment fit, Janes (1993) applied Tinto’s (1985, 1986, 1987) student retention theory and Astin’s (1975, 1977, 1984) student involvement theory to eight Black baccalaureate nursing graduates from a predominantly White institution (PWI) and a historically Black college and university (HBCU). The researcher found that establishing meaningful faculty relationships was important. Being a member in student subcultures played an important role in integration at PWI academic and social systems, but not as important at the HBCU. The main factor in determining success was the participants’ individual commitment to goal completion, which supports Tinto’s (1987) contention that individual commitment is central to degree completion. The study supported Astin’s (1982) theory of student involvement.

English (1993) used Tinto’s model to investigate how support services to assist students with hearing impairment relate to the levels of academic and social integration and the strength of the students’ intentions to stay in school. The researcher conducted the study among a sample of 60 hearing impaired college students and found students had a higher level of academic integration compared to social integration, and a very high level of commitment to their intention to stay in school. Support services had a direct effect on academic integration; however, the support services did not contribute to social integration.

To continue the research of exploring variables that are significantly related to integration, Thompson (1994) employed Tinto’s model as a basis of examining academic and social integration. In Thomas’ study, academic and social integration of full-time, undergraduate Black students enrolled in selected predominantly White institutions in Florida was examined.
Thompson collected data from a sample of 260 undergraduate Black students, using Pascarella and Terenzini’s (1980) Institutional Integration Scales. The results revealed the participants’ college grade point average and high school racial composition influenced academic and social integration. The results indicated a significant positive relationship between students’ academic level in college and overall academic integration and social integration. Additionally, gender was not found to contribute to the overall academic and social integration.

By means of Tinto’s (1987) model, Burns (1994) examined factors affecting student persistence in a post-secondary religious education program of the Church of Jesus Christ of Latter-day Saints. He also administered Pascarella and Terenzini’s (1980) Institutional Integration Scales to 550 first time enrollees of Institute of Religion Programs nationwide. Burns’ study revealed Tinto’s model demonstrated significant relationships to persistence among Latter-Day Saints institute students. Academic integration showed a stronger relationship than social integration. Moreover, institutional commitment, personal religion, age, and gender had the greatest effect on persistence.

Furthermore, while most of the work around social and academic integration has been conducted with non-student athletes, Schutt (1996) applied Tinto’s model of student departure along with Pascarella and Terenzini’s (1980) IIS and a Student Opinion Questionnaire to assess aspects related to persistence and retention among student-athletes. Schutt sought to develop a multidimensional instrument for use with student-athletes that assess academic integration and social integration, the major dimensions of Tinto’s model. Comparing 142 student-athlete’s scores on the IIS and Student Opinion Questionnaire to scores of 118 non-athletes, Schutt found that student-athletes in revenue sports (one that generates revenue for the athletic department, such as basketball or football) were less positive about their interactions with other students than were student-athletes in non-revenue sports (a sport considered to be smaller in participation numbers and that does not generate revenue for the athletic department, such as golf or volleyball). Student-athletes in revenue sports had less positive opinions regarding their educational goals and expectations when compared to non-athlete students and student-athletes in non-revenue sports. Non-athlete students and student-athletes in non-revenue sports were significantly different in their interactions with faculty. The total student-athlete population and non-athlete students had significant differences in faculty concern and academic and intellectual development.
The retention literature demonstrates the important relationship between interaction and academic and social integration. Some theorists define interactions in terms of faculty and student interaction. One such researcher, Hanna (1997) examined the nature of the interaction that occurs between students and faculty and its relationship to academic and social integration. Using quantitative and qualitative research methods, Hanna collected data using Pascarella and Terenzini’s (1980) IIS and case study analysis from a sample of 206 students at Capital College in Laurel, Maryland. Scores from the IIS indicated the students were socially and academically well integrated. The nature of student and faculty interactions emerged as thematic categories; and student and faculty interactions had meaning and operated positively on students’ college integration.

In moving toward an integrated paradigm of student success, all facets of the institution must be involved. Ferrer (1997) was concerned with the degree to which academic and social integration and external environmental factors played a role in the academic success of community college students. In a study conducted among 640 successful and unsuccessful students enrolled at Miami-Dade Community College, Ferrer found that the unsuccessful group showed lower academic integration than the successful group. The successful student group included students continuously enrolled for one academic year with a grade point average ≥ 2.0, not enrolled in English-As-A-Second Language course(s), and in good academic standing (Belcher, 1994). The unsuccessful student group included students returning to Miami-Dade Community College after having been suspended from the institution for a major term or an academic year and not enrolling in English-As-A-Second Language course(s) (Belcher, 1994). There were no significant differences in scores on Pascarella and Terenzini’s (1980) IIS among the groups in regards to social integration. Additionally, females, Hispanics, and those not requiring college preparatory placements scored higher on academic integration, indicating they had established a connection with the faculty and staff at the institution.

In an article entitled “Using Cooperative Learning to Enhance the Academic and Social Experience of Freshman Student Athletes,” Dudley, Johnson, and Johnson (1997) investigated a university’s department of academic counseling for intercollegiate athletics’ effectiveness in creating a supportive environment in which freshmen athletes worked cooperatively to ensure both their academic integration and social integration into college. The Classroom Life Measure (Johnson & Johnson, 1983), The Program Assessment Questionnaire, and The Resource Evaluation Questionnaire were all administered to 107 freshmen student-athletes. The
participants reported the program staff provided academic and personal support while structuring and facilitating cooperative learning groups. The student-athletes were involved in positive and supportive relationships with fellow participants.

Particular attention must be paid to the college learning environment as a backdrop for students’ academic progress. Beard (1998) conducted a study on a sample of 77 African American students with learning disabilities attending Florida Agriculture & Mechanical University. This study investigated the relationship of writing self-efficiency and retention variables [academic integration, social integration, campus support services, socioeconomic (SES) and parental education] to the academic progress of African American students. Beard collected data using Pascarella and Terenzini’s (1980) IIS and found a nonsignificant relationship among writing self-efficiency, retention variables, and the academic progress of the students.

The importance of exploring the nature of student retention in higher education is expanded in a study conducted by Andreatta (1998). Andreatta’s study used in-depth qualitative interviews and a quasi-experimental design to test and expand Tinto’s Model of Institutional Departure (1993). This study extended the model by expanding the definition of academic and social integration to include additional types of formal and informal institutional experiences. The sample was drawn from students who enrolled in a First Year Experience course during the 1996-1997 academic year at a large public research institution; 613 students served as the control group and 157 students served as the treatment group. Employing Pascarella and Terenzini’s (1980) IIS, Andreatta found that Tinto’s model lacked specificity in understanding First Year Experience enrollees. Also, the nature of faculty and peer group interactions was different than previously assumed. Additionally, the influence of external community was far stronger than is indicated by the current model.

According to Tinto (1993) and other researchers, student departure from institutions stems from a longitudinal process of interactions between the individual with given attributes, skills and resources, and other members of the academic and social systems of the institution. Tinto’s model guided a study conducted by Howell (1999). This particular study explored differences between third-year students who persisted and those who voluntarily withdrew from a large northeastern state university. Howell gathered data using Pascarella and Terenzini’s (1980) IIS from a random sample of 128 registered third-year students who had persisted and voluntarily withdrawn (desisters). Findings revealed evidence of a difference between persisters
and desisters with regard to academic integration, institutional and goal commitment, and college performance. No strong relationship was found between desisters and persisters with regard to social integration.

To improve the retention efforts of Hispanic students, institutions must better understand the effects of the social and academic communities of the institution and the influence of external factors on Hispanics’ continuing persistence. A study conducted by Rodriquez (1999) identified social and academic factors that contributed to the persistence or departure of Hispanic students using Tinto’s model of institutional departure. Rodriquez utilized qualitative research techniques to interview 15 junior and senior Hispanic students in good academic standing (persisters) and six Hispanic students no longer registered (non-persisters) at St. John’s University. The results of the study indicated the persisters recorded positive relationships with faculty, which resulted in strong academic integration. Non-persisters noted problems with academic advising and had a non-significant relationship between variables concerning faculty, resulting in weak academic integration. Both groups had positive social integration. Persisters were influenced by goals and love for the institution. Non-persisters’ lack of institutional commitment outweighed the weak academic integration.

Collaborative learning strategies can enhance student learning within the classroom and satisfaction with the environment. Lewis (2000) measured collaborative learning strategies among 384 freshmen students enrolled in an urban community college located on the east coast in terms of academic integration, social integration, and satisfaction with the environment. The research was guided by Tinto’s research on the educational character of student persistence. Findings of the study indicated a significant difference between the self-reported learning gain scores of students scoring low, medium, or high in academic integration, social integration, and satisfaction with the environment. The researcher concluded that the results of the study were consistent with previous research and lent support to Tinto’s theory of student achievement.

The research of Robinson (2003) lends support to the importance of considering developmental variables such as identity to enhance models predicting undergraduate persistence. In a study conducted with 182 undergraduate students at a large predominantly White institution, Robinson found that identity mediated the impact of academic integration in the prediction of persistence at the institution and was the only predictor to exert a significant effect on persistence in higher education. Scores from the Institutional Integration Scales (Pascarella & Terenzini, 1980), the Ego Development Scale (Ochse & Plug, 1986), and the
Undergraduate Persistence Intentions Measure (Robinson, 1996) were consistent with Eriksonian theory, in that identity ensued academic integration and is an essential task during the adolescent to young adult transition.

Smith (2004) also used Tinto’s model of student departure as the conceptual framework in her study that examined students’ perceptions of academic advising and determined the relationship between academic advising and student persistence. Gathering data from the Florida State University Satisfaction Inventory, an instrument designed to evaluate experiences within the campus environment; Smith sampled 3,943 undergraduates during the 2000-2001 and 2001-2002 academic years and a subset of 2,064 freshmen from the original sample. The results revealed significant differences among the type of advisor (faculty, professional, or peer). There were no significant differences between returning and departing students with regards to academic advising or academic integration, social integration, or institutional commitment. However, the findings indicated a positive correlation between academic advising and academic integration.

Researchers have applied Pacarella & Terenzini’s (1980) IIS to measure five facets of college student academic and social integration. The scale was based on Tinto’s model of college student withdrawal. French and Oaks (2004) examined psychometric properties of the scales on two samples (first sample \(N=773\), second sample, \(N=1,734\)) of first-year undergraduate students during the academic years of 1999-2000 and 2000-2001. The results led to item revision and additions. The revised scale scores had satisfactory internal consistence reliability and intercorrelations among the subscales and with the total scale. The researchers concluded that the IIS appears to be a useful tool for assessing college students’ level of academic integration and social integration with respect to interactions with faculty, peers, and the university environment.

Based on the results and past suggestions of French and Oak (2004) and Fox (1984) concerning Pacarella & Terenzini’s (1980) IIS, Downing (2005) also used the revised IIS in a study on 145 second, third, fourth and fifth year college students who took a First Year Experience Program during their freshman year. Downing explored the relationship between academic and social integration and retention of first year African American students at a predominantly White institution. Downing found two statistically significant predictors of retention among the participants: first, faculty concern for student development and teaching; and second, institutional goal and commitment, indicating academic integration is most difficult for African American students. The self-reporting data revealed students felt faculty did not have
an interest in them as a student, were unwilling to spend time outside the classroom with the student, and/or showed little interest in assisting the student develop in more areas than just academic areas. These results explain that what is occurring inside the classroom is having a significant impact on the decision students will make to return to the university.

The complexity of ascertaining persistence behavior is further highlighted in a 2005 study by Weber-McKee among community college students. She raised the issue of whether or not the persistence of community college students who begin college with remedial education programs is positively influenced by social and academic integration. The Community College Survey of Student Engagement (CCSSE; Tinto & Goodsell-Love, 1995) was administered to 129 community college students who completed a summer remedial program and 137 community college students who completed a required first-semester remedial program. The findings uncovered the influence of academic integration and social integration for long-term academic support. The findings indicated Tinto’s theory of student persistence applies with respect to academic integration, but is not accurate in its representation of the theoretical influence of social integration of the population studied.

In summary, noticeably, academic and social integration have received more than a cursory review from social scientists and educators concerned with the impact of these factors on persistence and retention. For students, finding the appropriate setting and becoming a part of some unit (socially and/or academically) is what appears to reinforce persistence. To the extent that the findings of the literature presented in this review are valid, they suggest that colleges and universities may be able to retain their students by encouraging interaction socially and academically between students and faculty. Through these interactions, students will persist and graduate from the institution.

**Institutional and Goal Commitment**

In discussing this theme, only three studies emerged supporting the definition of Tinto’s dimension of institutional and goal commitment. Tinto (1975) introduced his interactionalist model. The basis of Tinto’s model is the theory that “lack of integration into the social system of the college will lead to low commitment to that social system and will increase the probability that individuals will decide to leave college and pursue alternative activities” (p. 92). Goal commitment is described as the student’s commitment to the goal of earning a college degree.
while institutional commitment indicates the level of investment a student has in a given institution (Tinto, 1987).

Researchers have applied Tinto’s model to a variety of college populations. In a longitudinal study of a random sample of entering students at a residential university in central New York, Pascarella and Terenzini (1983) found that the students’ academic integration directly influenced their goal commitment. In turn, goal commitment had a direct influence on student persistence at the university. Similarly, the students’ social integration had a direct influence on institutional commitment, which, in turn, directly influenced their persistence. The researchers also noted significant differences based on student gender. In particular for the female students, social integration “had a somewhat stronger direct influence on female persistence than did academic integration, whereas the reverse appeared true for males” (p. 223).

Pascarella and Chapman (1983) investigated the validity of Tinto’s model of college student withdrawal in four-year residential institutions, four-year commuter institutions, and two-year commuter institutions. The researchers conducted a longitudinal study among 2,326 full-time freshmen at eleven two-year and four-year institutions. Data collected from the Student Involvement Questionnaire revealed that for the residential institutions, social integration had a significant direct effect on persistence. In addition, academic integration had a significant indirect effect on student persistence as transmitted through its influence on institutional and goal commitment. In the four-year and two-year commuter institutions, academic integration indirectly influenced student persistence through its direct effects on institutional commitment. Also, commitment to the institution was significantly defined by academic integration.

Using Tinto’s model, Munro (1981) examined factors related to students’ academic integration and social integration. Munro used the National Longitudinal Study of the High School Class of 1972 to obtain a sample of 6,018 full-time students entering four-year colleges. The results of this study found that academic integration had a much stronger effect on institutional commitment than the students’ social integration. Furthermore, academic integration had a strong effect on the students’ persistence, whereas social integration had no significant effect. Based on Munro’s findings, one may conclude that academic integration plays a major role in student persistence and in their academic success.
Degree Commitment and Athletic Commitment

In addressing this theme, the researcher examined a common interest and evaluation when discussing the student-athlete population. The researcher found 12 database studies regarding the commitment of student-athletes. In *Leaving College*, Tinto (1993) described the primary roadblock to persistence as the absence of commitment. Goal commitment is a strong predictor of persistence (Astin, 1975; Hyatt, 2003; Tinto, 1993). The student’s level of goal commitment affects his or her motivation towards integrating into the academic component of going to college (Astin, 1982). Hyatt (2003) identified three aspects of goal commitment that need to be evaluated when discussing the student-athlete population: degree commitment, athletic commitment, and institutional commitment. Hyatt performed the study among African American football and basketball players enrolled at California State University Northridge to identify student-athletes’ motivations and intentions about college. Findings of the study indicated the participants demonstrated a strong commitment toward extending their athletic careers and a low commitment to attaining a degree. The researcher concluded that strict standards of academic eligibility and academic progress imposed by the National Collegiate Athletic Association (NCAA) attributed to the participants’ persistence.

Sedlacek’s (1987) study illustrated that there is a strong relationship between identifying with the institution and retention with regards to African American student-athletes. The main issue for Sedlacek is that the focus of recruitment is the identification with the sports team, and athletes are more often than not encouraged to see themselves as members of the sports teams or identify with the school’s mascots. Consequently, they are socialized to perceive themselves as football or basketball players, or as a “Bruin”, “Trojan”, or a “Seminole.” Very rarely are these athletes encouraged to perceive their identity in academic terms such as a student, a biology major, or an education major. Sedlacek found that it is likely the strength of the image or reputation of the athletic program may transcend athletics to include commitment to the institution (Sedlacek, 1987).

Often student-athletes are committed to attending college to participate in sports, but are less committed to obtaining a degree. Blann (1985) examined the relationship of student-athletes’ gender, class, and competitive level in intercollegiate athletics and the student-athletes’ ability to formulate mature educational and career plans. Gathering data by the Student Developmental Task Inventory, Blann concluded that freshman and sophomore male student-
athletes did not formulate mature educational and career plans as did freshmen and sophomore male non-athletes.

Lang, Dunham, and Alpert (1988) conducted a study among the 1986-1987 University of Miami football team to identify factors that predict why some college football players integrate and succeed in their academic studies, while other become detached and fail academically. The results indicated pre-college academic performance, academic motivation, and history of trouble, socioeconomic, and academic background as variables were most important in predicting the academic success or failure of the participants.

A case study conducted by Adler and Adler (1988) revealed that there are five elements in the process of developing intense loyalty to sport teams. The researchers conducted participant observation of major basketball programs at medium-sized private universities between 1980 and 1985. Of the 6,000 student-athletes studied, domination, identification, commitment, integration, and alignment with members of each basketball team related to the formation of intense organizational loyalty.

In an effort to develop a model to empirically measure sports commitment, Scanlan et al. (1993) introduced the Sports Commitment Model, which proposes that sport commitment is determined by sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities. Data collected by The Athletes’ Opinion Survey among 95 youth girls and 83 youth boys revealed that sports enjoyments, personal investments, and involvement opportunities were all positively correlated to sport commitment. Sports enjoyment and personal investments together accounted for 58 percent of the variance in sports commitment, suggesting that sport commitment is a psychological state representing the desire or resolve to continue sport participation.

In a study conducted among 702 African American football and basketball student-athletes from 42 NCAA Division I universities, Sellers and Kupermine (1997) investigated whether African American male college student-athletes unrealistically focus their career goals on professional athletics to the detriment of their academic pursuits. The researchers found that only five percent of the sample was goal discrepant, and the majority of this sample was underclassmen. Additionally, the intensity of the athletic program and segregation of athletes from non-athletes were stronger predictors of goal discrepancy than were personal characteristics (socioeconomic status or pre-college academic preparation).
Guest (1998) conducted a study among 226 male and female scholarship and non-
scholarship participants on an intercollegiate division I athletics team, in which she found that
perceptions of motivational climate emerged as the most significant predictor of commitment.
Data from the Task & Ego Orientation in Sport Questionnaire (TEOSQ; Duda & Nicholls, 1992),
Sport Commitment Questionnaire (SCQ-A; White et al., 1998), and the Perceived Motivational
Climate in Sport Questionnaire (PMCSQ-2; Newton & Duda, 1997) revealed that males tended
to view their athletic environment as more mastery focused than did females. In addition, adding
four new variables to dispositional goal orientation (task and ego orientation, mastery, and
performance climate) did not emerge as significant predictors of commitment in males. In
contrast to this finding, three variables emerged as significant predictors of commitment in
females: task, perceptions of a performance, climate, and perceptions of a mastery climate.

In a study conducted by Van Voorhis (2000) at an NCAA Division III, small, private
college located in New York, 49 female collegiate sport participants were studied to explore
sport commitment and sport participation motivation. Data collected from The Athletes’ Opinion
Survey (AOS; Carpenter & Coleman, 1998) and the Participation Motivation Questionnaire
(PMQ; Flood & Hellstedt, 1991) revealed a positive relationship between the ‘Sport
Commitment’, ‘Personal Investments’, ‘Recognition Opportunities’, and ‘Social Opportunities’
subscales and the ‘Competitive’, ‘Fitness/Skill’, and ‘Social’ subscales. Additionally, negative
correlations were found for ‘Involvement Alternatives.’

Weiss (2003) examined the relative influence of social support, cost, motivational
climate, and perceived competence on psychological behavioral commitment. The researcher
administered the Sport Commitment Measure (Scanlan et al, 1993) to 304 competitive female
gymnasts whose ages ranged from eight to 18. The results suggested that age and competitive
level are important factors to include from both theoretical and applied perspectives of the sport
commitment model.

The importance of identifying multiple role identities of student-athletes and to what
extent other role identities are compromised when university student-athletes over-identify with
the athletic role was demonstrated in a study conducted by Miller and Kerr (2003). Data from
unstructured in-dept interviews of eight senior student-athletes enrolled at a Canadian University
revealed three distinct spheres: athletic, academic, and social. The results indicated that the
participants invested heavily in the athlete role earlier and mid-periods of college, often at the
expense of other interests including commitments to family, friends, and school.
Potuto and O’Hanlon (2005) conducted a national study of student-athletes regarding their experiences as college students. The researchers surveyed student-athletes who completed at least 85 credit hours toward graduation by Spring 2005 at 18 NCAA Division IA universities. Data were collected from 930 student-athletes out of 2,335 contacted, for a return rate of 41.2%. The researchers sought to describe “overall educational experiences”, “athletics participation”, “student-athlete experiences”, and assessment of tradeoffs caused by athletics participation. The student-athletes reported the tradeoffs they made in pursuit of college and athletic goals were “acceptable consequences of athletics participation.” The results demonstrated that student-athletes at these NCAA Division IA universities believed their athletics experiences contribute in meaningful ways to their development and that their overall college experiences are positive.

In summary, the literature presented in this review demonstrates that there is little question that college athletes exhibit a high level of commitment. Rather, the question is the focus and extent of their commitment. The nuances of commitment that need to be clarified within the student-athlete population are the differences between the goal of attending college and the student’s desire to attend a particular institution to obtain a college degree from that particular institution, and the relationship between commitment to degree attainment, and athletics commitment. To the degree that the findings in this literature review are authentic, one can suggest that a high level of institutional commitment can enhance the students’ willingness to get more involved in the social and academic aspects of the campus and vice-versa, thereby increasing their commitment to degree attainment. Unfortunately, a lack of integration within the campus environment can prohibit the development of institutional commitment as well as social and academic integration in student-athletes.

Summary of Literature Review

The constructs of social and academic integration as measures of student persistence have generally been found to be consistent measures among the traditional four-year college and university student population. However, these constructs for student-athletes have not been fully investigated, with existent research being sparse. Furthermore, social and academic integration have been unreliable measures among certain student groups (e.g., two-year college students, commuters, nontraditional students, and high-risk student groups). Several studies support the role of academic integration and social integration (Bers & Smith, 1991; Blanco, 1989; English, 1993; Ferrer, 1997; Hanna, 1997; Howell, 1999; Lavine, 1992; Lewis, 2000; Rodriguez, 1999;
Moreover, other studies find that academic integration is overshadowed by other factors (Andreatta, 1998; Beard, 1998; Burns, 1994; Downing, 2005; Dudley, Johnson, & Johnson, 1997; Griffin, 1990; Janes, 1993; Smith, 2004).

Pascarella and Terenzini’s (1980) IIS has been one of the most prolific and valid instruments to assess academic and social integration, the major dimensions of Tinto’s (1975, 1987, and 1993) student departure model. The IIS appears to be a useful tool for measuring college students’ level of integration with respect to interactions with faculty, peers, and the university environment (Andreatta, 1998; Beard, 1998; Bers & Smith, 1991; Burns, 1994; Downing, 2005; English, 1993; Ferrer, 1997; Fox, 1984; French & Oakes, 2004; Hanna, 1997; Howell, 1999; Lavine, 1992; Robinson, 2003; Ross, 1992; Schutt, 1996; Thomas, 1994).

Moreover, it appears that the presence and strength of goal commitment decreases the probability of withdrawing from an institution. The research indicates that goal commitment leads to higher academic development and performance, which results in enhanced academic integration, which in turn increases goal and institutional commitment. Furthermore, a high level of institutional commitment increases the likelihood of a student interacting socially with peers, other students, staff, and faculty. Increased social integration in turns leads to increased satisfaction with campus experiences and, therefore, enhances institutional commitment. Although students may appear to be highly committed to pursuing athletic endeavors, they may be less committed to earning a college degree (Adler & Adler, 1988; Blann, 1985; Guest, 1998; Hyatt, 2003; Lang, Dunham, & Alpert, 1998; Miller & Kerr, 2003; Sellers & Kupermine, 1997). Tinto argued that involvement in class and campus activities is important to student persistence; however, the student-athletes’ intense involvement in practice and competition effectively isolates them from the campus community, which may limit their ability to integrate. The students’ willingness and ability to integrate into the social and academic communities of the campus is indicative of their level of commitment to attaining a degree (Hyatt, 2003).

Critical Analysis of Literature Review

The literature on academic and social integration sometimes discusses the two variables as interdependent and other times as independent of one another. Many of the researchers agree that a students’ integration into the social and academic system of an institution and the students’ interaction with these systems are the primary determinants of persistence. Tinto (1975) posited
that integration into the academic system of college is what most directly affects goal commitment, whereas behavior in the social system most directly affects a person’s institutional commitment.

Academic integration has been defined in many ways by many researchers (Astin, 1975; Pascarella, Duby, & Iverson, 1983; Terenzini & Pascarella, 1977, 1978; Tinto, 1975). Each definition included the following characteristics: (a) freshman year cumulative grade point average, (b) a scale measuring a student’s perceived level of intellectual development, and (c) a scale measuring a student’s perception of faculty concern for quality classroom teaching and student development. In addition, the definitions of academic integration have included the frequency of non-classroom contacts with faculty and the ability to obtain basic information and advice about academic programs.

Like academic integration, social integration has been defined in several ways (Astin, 1975; Beal & Noel, 1980; Pacarella, Duby, & Iverson, 1983; Spady, 1970; Tinto, 1975): (a) the measurement of the extent and quality of a student’s relationship with peers at the institution; (b) the measurement of the quality and impact of a student’s informal, non-classroom interactions with faculty; (c) the frequency of non-class contacts with faculty; (d) the opportunity to socialize informally; and (e) the ability to discuss a campus issue or problem. The literature illustrated social integration may include developing close friendships, memberships in clubs and groups, informal relationships with faculty and staff, and attendance at social or cultural campus events.

The literature pertinent to commitment (goal, institutional, degree, and athletic) falls into the areas of academic and athletic motivation, persistence, retention, and student services, and involved some commonly used terms. When discussing retention in higher education, students are described as persisters, desisters, or attainers. Persisters are students who continue college enrollment until they complete their degree requirements. Desisters are students who voluntarily withdraw from college prior to degree completion. Attainer is a term used to describe a student who leaves college prior to graduation after they have met a personal or professional goal such as experiencing college as a transition to a professional league or merely participating in college sports during their eligibility years. The term desister implies a negative connotation, and may be incorrectly used when describing student-athletes. Many athletes when entering college want only to extend their athletic careers or to attain the status associated with college athletics, not to earn a degree (Lang et al., 1988). If the institution does not influence the goal of extending an
athletic career, then a student-athlete who leaves before graduation may view himself or herself as an attainer, not a desister.

Although this study examines the social and academic integration and institutional commitment of student-athletes, there has not been an abundance of supporting research on the subject dealing solely with student-athletes. Therefore, many of the studies reported dealt with traditional non-athlete students. For a more definitive argument, certainly, additional research is needed that examines which factors impact exclusively on student-athletes’ persistence toward degree completion.

**Research Questions**

The following research questions were developed based on the literature review and the aforementioned Theory of Individual Departure developed by Tinto (1993).

RQ1: How do track and field student-athletes rate the process of their own social and academic integration experiences?

RQ2: Are there differences in social integration of track and field student-athletes as a measure of gender, race, and classification?

RQ3: Are there differences in academic integration of track and field student-athletes as a measure of gender, race, and classification?

RQ4: Are there differences in institutional and goal commitment of track and field student-athletes as a measure of gender, race, and classification?

RQ5: To what extent does social integration and academic integration influence institutional and goal commitment after controlling for the background characteristics?
CHAPTER 3

METHOD

As previously discussed, the purpose of this study was to examine the social and academic integration experiences of track and field student-athletes and to determine whether these experiences influence their goal and institutional commitment. This chapter will describe the quantitative methodological approaches that were employed to collect and examine the data in order to answer the research questions.

**Design**

In order to answer the proposed research questions, the present quantitative research was designed as a non-experimental cross-sectional descriptive study. A cross-sectional study is defined as an examination of a phenomenon that occurs one point in time (Depoy & Gitlin, 1994). For the current study, data were collected at one point in time from male and female track and field student-athletes enrolled at institutions in the Atlantic Coast Conference (ACC). The survey method was employed in this particular study because of the economy of the design and the quick turnaround in collecting the data. Babbie (1990) stated that there is an advantage in identifying attributes of a large population from a small group of individuals.

**Variables**

The independent variables of, gender, race, and classification were treated as categorical variables. The dependent variables, social integration and academic integration were summated scores based on the subscales of social integration and academic integration. For research question four, the independent variables were social integration and academic integration, and the dependent variable was institutional and goal commitment.

**Control Variables**

A control variable is a variable that affects the dependent variable. The student-athlete’s self-reported current grade point average and mother’s educational level were the control variables and held constant to examine the relationship between the independent and the dependent variables. These control variables are consistent with data analysis techniques.
employed by Pascarella and Terenzini (1980). It was appropriate to control these variables because a substantial body of research suggests that the students’ interactions with the college environment are not independent of these particular characteristics (McDaniel & Graham, 2001; Pascarella & Terenzini, 1980; Robinson, 2003). Therefore, it stands to reason that these characteristics are influential in any aspect of student integration that is being examined in this study.

**Population and Sample**

The population examined in this study was men and women track and field participants at Division IA member institutions of the NCAA. The purposive sample included all track and field participants of member institutions in the ACC during the 2006-2007 academic year. The respondent sample included ten institutions in the ACC during the 2006-2007 academic year. The institutions in this conference were chosen purposefully to ensure diversity in the student-athlete integration contexts in terms of type of institution (public and private), size of institution (undergraduate enrollment), and competition level (number of varsity sports offered and NCAA championships). Additionally, the population and sample were selected because of the researcher’s identity as a former track and field athlete and coach, and relationships with coaches in the conference. The institutions were selected on the basis of their willingness to participate in the study. Two academic institutions did not participate in the study: One of these institution’s head coaches did not allow graduate students from other institutions to conduct research involving their student-athletes, while the other institution’s head coach indicated the research study could not be conducted due to a policy set by the athletic department. One men’s team’s survey packets were lost in the USP mail. Three women’s teams did not return five phone calls made over a five-week time frame.

**Instrumentation**

**Institutional Integration Scales**

For the purpose of this study, data were collected using the Track and Field Social and Academic Integration Survey, which was modified from the IIS (Pascarella & Terenzini, 1980). This multidimensional instrument was designed to assess the major dimensions of social and academic integration depicted in Tinto’s (1975, 1987, 1993) model of student departure. The IIS is divided into three scales with four subscales: Peer-Group Interactions, Interactions with Faculty, Faculty Concern for Student Development and Teaching, and Academic and Intellectual
Development. This information is summarized in Table 3. The IIS has been used in a variety of studies examining undergraduate student persistence and retention (Andreatta, 1998; Beard, 1998; Bers & Smith, 1991; Burns, 1994; Downing, 2005; English, 1993; Ferrer, 1997; Fox, 1984; French & Oakes, 2004; Hanna, 1997; Howell, 1999; Lavine, 1992; Robinson, 2003; Ross, 1992; Schutt, 1996; Thomas, 1994). The structure of the IIS is compatible for research involving college students because it is relatively short and simple to administer (French & Oakes, 2004). Demographic information was modified to capture background information that is specific to the sport of intercollegiate track and field. A copy of this instrument is in Appendix E.

Table 3
Institutional Integration Scales (Pascarella & Terenzini, 1980)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Subscales</th>
<th>Alpha Coefficient</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Integration</td>
<td>Peer-Group Interaction</td>
<td>.84</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Interactions with Faculty</td>
<td>.83</td>
<td>5</td>
</tr>
<tr>
<td>Academic Integration</td>
<td>Faculty Concern for Student Development &amp; Teaching</td>
<td>.82</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Academic &amp; Intellectual Development</td>
<td>.74</td>
<td>7</td>
</tr>
<tr>
<td>Institutional &amp; Goal Commitment</td>
<td></td>
<td>.71</td>
<td>6</td>
</tr>
</tbody>
</table>

Social Integration Scales

Social integration was measured by combining the mean of the scores from the subscales Peer-Group Interactions and Interactions with Faculty. Previous research has utilized the sum of the scores from these subscales to establish a measure of social integration (Beard, 1998; Bers & Smith, 1991; Burns, 1994; Ferrer, 1997; Foz, 1984; French & Oakes, 2004; Grosset, 1991; Lavine, 1992; Robinson, 2003; Ross, 1992; Schutt, 1996; Terenzini, Pascarella, Theophilides, & Lorang, 1983; Terenzini & Wright, 1986; 1987).

Peer-Group Interactions Subscale. This subscale was developed by Pascarella and Terenzini (1980) and was designed to measure the extent to which a student has enhanced their interpersonal skills, interaction with their peers, and extracurricular involvement at their institution. The seven items in this subscale were scored on a Likert scale ranging from strongly
agree (5) to strongly disagree (1). Pascarella and Terenzini reported a reliability coefficient of .84 for this subscale. In subsequent studies utilizing the IIS, in general, reliability has averaged approximately .83. Sample items include: “Since coming to this university I have developed close personal relationships with other students” and “Few of the students I know would be willing to listen to me and help me if I had a personal problem.”

**Interactions with Faculty Subscale.** This subscale was developed by Pascarella and Terenzini (1980) and was designed to measure the quality and impact of students’ non-classroom contacts with faculty. The five items in this subscale were scored on a Likert scale ranging from strongly agree (5) to strongly disagree (1). Pascarella and Terenzini reported a reliability coefficient of .83 for this subscale. In subsequent studies utilizing the IIS, in general, reliability has averaged approximately .83. Sample items include: “My non-classroom interactions with faculty have had a positive influence on my personal growth, values and attitudes,” and “Since coming to this university I have developed a close, personal relationship with at least one faculty member.”

**Academic Integration Scales**

Academic integration was measured by combining the mean of the scores from the subscales *Faculty Concern for Student Development and Teaching* and *Academic and Intellectual Development*. Summing scores from the aforementioned subscales is a process that has been indicated in several studies to assess academic integration (Beard, 1998; Bers & Smith, 1991; Burns, 1994; Ferrer, 1997; Foz, 1984; French & Oakes, 2004; Grosset, 1991; Lavine, 1992; Robinson, 2003; Ross, 1992; Schutt, 1996; Terenzini, Pascarella, Theophilides, & Lorang, 1983; Terenzini & Wright, 1986, 1987).

**Faculty Concern for Student Development and Teaching Subscale.** This subscale was developed by Pascarella and Terenzini (1980) and was designed to measure a student’s perception of faculty concern for his or her development inside and outside the classroom. The five items comprising this subscale were scored on a Likert scale ranging from strongly agree (5) to strongly disagree (1). The original authors of this subscale reported a reliability coefficient of .82. In subsequent studies utilizing the IIS reliability has averaged approximately .80. Sample items include: “Most of the faculty members I have had contact with are interested in helping students grow in more than just academic areas” and “Few of the faculty members I have had contact with are generally outstanding or superior teachers.”
**Academic and Intellectual Development Subscale.** This subscale was developed by Pascarella and Terenzini (1980) and was designed to measure a student’s perceived level of academic and intellectual development, experiences and satisfaction of the quality of learning they received while attending their institution. The seven items included in this subscale were scored on a Likert scale ranging from strongly agree (5) to strongly disagree (1). Pascarella and Terenzini reported a reliability coefficient of .74. In subsequent studies utilizing the IIS reliability has averaged approximately .71. A sample item is “My academic experience has had a positive influence on my intellectual growth and interest in ideas.”

**Institutional and Goal Commitment Scale**

Pascarella and Terenzini (1980) designed the Institutional and Goal Commitment scale to measure a student’s personal commitment to the institution and to goals associated with graduation and career. The six items in this scale were scored on a Likert scale ranging from strongly agree (5) to strongly disagree (1). Pascarella and Terenzini reported a reliability coefficient of .71. In subsequent studies utilizing the IIS, reliability has averaged approximately .70. Sample items are: “I am confident that I made the right decision in choosing to attend this university” and “It is important to me to graduate from this university.”

**Background Variables**

There is a substantial body of research suggests that the students’ interactions with the college environment are not independent of particular background characteristics (McDaniel & Graham, 2001; Pascarella & Terenzini, 1980; Robinson, 2003). Therefore, it stands to reason that these characteristics are influential in any aspect of student integration that is being examined in this study. The background variables in this study were: (A) Parent’s level of education, each student-athlete was asked to indicate the highest level of education achieved by his or her mother. Student-athletes responded by circling one of the following: graduate degree, college degree, some college, high school diploma, GED, or lower than high school. Mother’s level of education was treated as a control variable within the analysis. (B) Current grade point average, each student-athlete was asked to indicate their current college grade point average. This response was self-reported by the individual and was not official as reported by the institution’s registrar’s office. Grade point average was treated as a control variable within the analysis. (C) Gender, each student-athlete was asked to indicate their gender (male or female) and this variable was treated as an independent variable as well as a control variable in the analysis. (D)
Race, student-athletes identified their race/ethnicity by checking the corresponding item representing their race/ethnicity. Student-athletes chose from African American, Alaska native/Indian American, Asian American, Hawaiian/Pacific Islander, Latino/Chicano/Hispanic American, White American, other, or International. If a student-athlete chose International, they responded by specifying which country. Race was treated as an independent variable as well as a control variable in the analysis. (E) Classification, student-athletes indicated their year in college during the 2006-2007 academic year. Respondents wrote their classification: (1) freshman, (2) sophomore, (3) junior, (4) senior, or (5) graduate and this variable was treated as an independent variable as well as a control variable.

Validity and Reliability of the Instrument

Validity

According to Creswell (2003), there are three types of validity: content validity, construct validity, and predictive validity. Content validity refers to the extent to which items measure the content they were intended to measure. Construct validity is the extent to which items measure hypothetical constructs or concepts. Finally, predictive validity refers to the extent that scores predict a criterion measure.

To establish content validity for the Institutional Integration Scales, Pascarella and Terenzini (1980) constructed scales that measure academic integration, social integration, and commitments through systematic analyses and the educational research of Tinto’s (1975) model of student departure. Academic integration has been determined primarily by the student’s academic performance and his or her intellectual development during the college years. Social integration has been determined primarily to be the level and degree of congruency between the student and his or her social environment (e.g., extracurricular activities and peer group interactions). Levels of social and academic integration lead to the additional component, commitment. Commitment has been determined to be the level of commitments to the institution and to goals associated with graduation and career. Pascarella and Terenzini (1980) assessed various dimensions of social and academic integration, and goal and institutional commitment, by developing a series of five-response Likert items. The items were developed to draw on the various aspects of each dimension developed by Tinto (1975).

Pascarella and Terenzini (1980) established construct validity of the five scales through a factor analysis of responses from 763 freshman college students. The authors performed a screen
test, which yielded a solution of five factors with Eigenvalues ranging from 6.14 to 1.67. The five-factor solution accounted for 44.5% of the variance in the correlation matrix. The five factors, which are characterized by the subscale names Peer-Group Interactions, Interactions with Faculty, Faculty Concern for Student Development and Teaching, Academic and Intellectual Development, and Institutional and Goal Commitments, were found to be consistent with the dimensions specified by Tinto’s (1975) model. Pascarella and Terenzini (1980) reported the following factor loadings: Items in the Peer-Group Interactions subscale ranged from -.37 to .82; the Interactions with Faculty subscale items ranged from .47 to .86; the Faculty Concern for Student Development and Teaching subscale items ranged from .54 to -.77; the Academic and Intellectual Development subscale items ranged from .41 to .68; and the Institutional and Goal Commitments subscale items ranged from -.44 to .69.

Pascarella and Terenzini (1980) performed a multivariate analysis of covariance (MANCOVA) and a discriminant analysis to determine the predictive validity of the institutional integration scales resulting from the items. The authors utilized MANCOVA to determine if the institutional integration scales significantly differentiated between freshman year persisters and voluntary dropouts while statistically controlling for the influence of all pre-enrollment variables, academic performance, and extracurricular involvement. Additionally, stepwise discriminant analysis and classification analysis were used to estimate variable contributions to group discrimination and the predictive utility of the scales.

With the addition of the integration scales, the results of the stepwise discriminant analysis indicated an increase in the canonical $R^2$ (explanation of variation in group membership) of 21.5%. Each of the five scales significantly differentiated freshman persisters from voluntary dropouts at the univariate level, with persisters tending to score higher on all factor scales than the voluntary dropout group (Pascarella and Terenzini, 1980).

**Reliability**

Reliability is the consistency of a measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subject (Trochim, 2002). Reliability is normally estimated through the demonstration of internal consistency. To measure internal consistency, Pascarella and Terenzini (1980) applied Cronbach’s alpha reliability test to each scale. The resultant alphas were as follows: Peer-Group Interactions = .84; Interactions with Faculty = .83; Faculty Concern for Student Development and Teaching = .82; Academic and Intellectual Development = .74; Institutional and Goal
Commitment = .71. Several studies have addressed the reliability of the IIS using college student integration, persistence, and/or retention as the criterion. In general, reliability has averaged approximately .78. This information is reported in Table 3.

The partial and simple correlations for each scale were reported by Pascarella and Terenzini (1980). “The partial correlations represent the association between each scale and the criterion with the influence of all pre-enrollment variables, freshman academic performance, and involvement in extracurricular activities held constant” (p. 67). The partial correlations for the scales ranged from .16 to .34. The simple correlations for the scales ranged from .17 to .35.

**Current Reliability.** Cronbach’s alpha coefficients were calculated to determine the reliability of the survey instrument that was used in the current administration of the study. Nunnally and Bernstein (1978) stated a reliability coefficient of .70 is an acceptable rating. A coefficient of .70 refers to a consistency of 70% and the possibility of an error occurring 30% of the time. A coefficient of +1 indicates complete consistency with minimal error. The overall reliability coefficient of the social integration scale as well as the two subscales, peer group interactions and interaction with faculty had coefficients above .70. The overall coefficient of the academic integration scale was acceptable with a value of .74, but one of the two subscales (academic intellectual development) had a value less than .70. The institutional and goal commitment scale had a coefficient of less than .70; however the overall total reliability coefficient of the three scales was .84. This information appears in Table 3.1.

**Table 3.1**

<table>
<thead>
<tr>
<th>Cronbach Alpha Reliability Ratings</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>α</td>
</tr>
<tr>
<td>Social Integration</td>
<td>.80</td>
</tr>
<tr>
<td>Peer Group Interaction</td>
<td>.73</td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td>.80</td>
</tr>
<tr>
<td>Academic Integration</td>
<td>.74</td>
</tr>
<tr>
<td>faculty Concern for Student Development</td>
<td>.70</td>
</tr>
<tr>
<td>Academic and Intellectual Development</td>
<td>.61</td>
</tr>
<tr>
<td>Institutional and Goal Commitment</td>
<td>.62</td>
</tr>
<tr>
<td>Total</td>
<td>.84</td>
</tr>
</tbody>
</table>
Cronbach’s alpha reliability requires all items to be scored in the same direction when calculating the reliability of an instrument. Following this rule of thumb, the following items from the Faculty Concern for Student Development and Teaching subscale were reversed to make all the questions in a positive direction:

- Few of the faculty members I have had contact with are generally interested in students
- Few of the faculty members I have had contact with are generally outstanding or superior teachers
- Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.

From the Academic and Intellectual Development subscale, the following item was reversed:
- Few of my courses this year have been intellectually stimulating.

From the Peer-Group Interaction subscales, the following items were reversed so all questions were positively scored:

- It has been difficult for me to meet and make friends with other students
- Few of the students I know would be willing to listen to me and help me if I had a personal problem
- Most students at this university have values and attitudes different from my own

From the Institutional and Goal Commitment scale, the following items were reversed so all questions were positively scored:

- I have no idea at all what I want to major in
- Getting good grades is not important to me
- It is not important to me to graduate from this university.
### Table 3.2
*Institutional Integration Scale Cronbach’s Alpha Coefficient Comparisons*

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>PGI</td>
<td>.84</td>
<td>.76</td>
<td>.88</td>
<td>Bl = .74</td>
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<td>.85</td>
<td></td>
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<td>Wh = .85</td>
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<td></td>
<td>Wh = .76</td>
<td></td>
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<tr>
<td>FCSD&amp;T</td>
<td>.82</td>
<td>.80</td>
<td>.82</td>
<td>Bl = .72</td>
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<td>.83</td>
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<td></td>
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<td>Wh = .68</td>
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<td>AID</td>
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<td>.84</td>
<td>Bl = .72</td>
<td>.93</td>
<td>.74</td>
<td>.83</td>
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<td></td>
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<td>Wh = .68</td>
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<tr>
<td>IGC</td>
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<td>.72</td>
<td>.60</td>
<td>Bl = .59</td>
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<td>.71</td>
<td>.81</td>
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<td></td>
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<td>Wh = .64</td>
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**Table 3.2 continued**

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<tbody>
<tr>
<td>PGI</td>
<td>.84</td>
<td>SI = .78</td>
<td>.84</td>
<td>.84</td>
<td>PGI &amp; IF = .83</td>
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<td>.84</td>
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<tr>
<td>IF</td>
<td>.83</td>
<td>.83</td>
<td>.83</td>
<td>.83</td>
<td>.89</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>FCSD&amp;T</td>
<td>.82</td>
<td>AI = .85</td>
<td>.82</td>
<td>.82</td>
<td>FCSDT &amp; AID = .82</td>
<td>.88</td>
<td>.82</td>
</tr>
<tr>
<td>AID</td>
<td>.74</td>
<td>.74</td>
<td>.74</td>
<td>.74</td>
<td>.82</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>IGC</td>
<td>.71</td>
<td>.71</td>
<td>.71</td>
<td>.71</td>
<td>.76</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* PGI=Peer Group Interaction; IF= Interactions with Faculty; FCSD&T= Faculty Concern for Student Development & Teaching; AID= Academic & Intellectual Development; IGC= Institutional & Goal Commitment; Bl= Black; Wh= White.
* Reported alphas and scales from Pascarella & Terenzini (1980)
Data Collection Procedures

Before conducting the study, the institutional review board at Florida State University approved a request to contact the participants, as shown in Appendix A. The investigator contacted each head coach in the ACC by telephone to discuss the purpose of the study, questionnaire items, and sampling procedures before the Institutional Integration Scales (IIS) was distributed to participants. Upon approval, the researcher obtained the mailing addresses for head coaches. The survey packets were mailed using the United States Postal (USP) mailing service system. The survey packet included a cover letter signed by the researcher, informed consent forms, the track and field social and academic integration surveys, instructions for administering the survey to the team, and a prepaid self-addressed return envelope. The head coaches designated the best day and time to distribute and collect the IIS; during a team meeting, after practice, or during travel to competition. Instructions for the coaches included: (a) explain the purpose of the study to the team members, (b) administer the survey to all of the team members at one time, and (c) inform the team that participation was voluntary and confidential. IIS respondents were reminded not to include their names, email address, or contact information on any section of the questionnaire. When the researcher was notified that the surveys had been completed, the researcher telephoned each university’s compliance office to retrieve the number of athletes listed on the team at the time the survey was administered. The official team squad list of every intercollegiate sport team recognized by the NCAA is monitored and documented in each university’s compliance office. Each head coach placed the completed surveys in the prepaid self-addressed return envelope provided by the researcher. The completed questionnaires were sent back to the researcher using the USP mail system. Two institutions elected to hand deliver the completed surveys to the researcher at the 2007 ACC Indoor Championship Meet.

A 15-day response period from the date of mailing was given prior to beginning follow-up procedures. Following the 15-day response period, a follow-up email was sent to the non-respondents to serve as a reminder to send the surveys back to the researcher as soon as possible. Within two weeks of the follow-up email, another follow-up email and a phone call was made for non-responding teams. Out of 582 surveys distributed at ten colleges and universities in the ACC, 367 student-athletes responded to the survey, which represented a response rate of 63.0%. The cover letter asking for research participation appears in Appendix B and a copy of the informed consent letter appears in Appendix C. The Track and Field Social and Academic Integration Survey appears in Appendix D.
Data Analysis

Data were analyzed using the Statistical Package for the Social Science (SPSS 14.0). Raw scores were obtained from respondents on the five subscales. Missing data was automatically deleted by the SPSS program. Data received from the returned questionnaires were screened through descriptive analysis. To measure internal consistency, Cronbach’s alpha reliability test was applied to each scale. Specific statistical approaches for each research question are addressed.

Research Question One

RQ1: How do track and field student-athletes rate the process of their own social and academic integration experiences?

In order to assess general patterns of student-athlete experiences of social and academic integration, means and standard deviations were calculated. Each of the 12 items comprising the social integration scales and the 12 items comprising the academic integration scales (listed in Appendix E) were examined. Responses were ranked by mean scores and analyzed by determining the level of social integration and academic integration experiences measured by the items.

Research Questions Two

RQ2: Are there differences in social integration of track and field student-athletes as a measure of gender, race, and classification?

Analysis of variance (ANOVA) was the statistical method employed to address this research question. A three-way ANOVA allows for comparisons of the individual and joint effect of three independent variables on one dependent variable. The independent variables of gender, race, and classification are categorical variables. The dependent variable, social integration, was a summated score based on the 12 social integration items addressing peer group interactions and interactions with faculty. The Tukey post hoc test was used to determine which groups exhibited significantly different scores when three or more groups were present.
**Research Question Three**

RQ3: Are there differences in academic integration of track and field student-athletes as a measure of gender, race, and classification?

Analysis of variance (ANOVA) was the statistical method employed to address this research question. A three-way ANOVA allows for comparisons of the individual and joint effect of three independent variables on one dependent variable. The independent variables of gender, race, and classification are categorical variables. The dependent variable, academic integration, was a summated score based on the 12 academic integration items addressing *faculty concern for student development and teaching* and *academic and intellectual development*. The Tukey post hoc test was used to determine which groups exhibited significantly different scores when three or more groups were present.

**Research Question Four**

RQ4: Are there differences in institutional and goal commitment of track and field student-athletes as a measure of gender, race, and classification?

Analysis of variance (ANOVA) was the statistical method employed to address this research question. A three-way ANOVA allows for comparisons of the individual and joint effect of three independent variables on one dependent variable. The independent variables of gender, race, and classification are categorical variables. The dependent variable, institutional and goal commitment, was a summated score based on the six institutional and goal commitment items. The Tukey post hoc test was used to determine which groups exhibited significantly different scores when three or more groups were present.

**Research Question Five**

RQ5: To what extent does social integration and academic integration influence institutional and goal commitment after controlling for the background characteristics?

Hierarchical multiple regression analysis was used to address this research question. Multiple regression explains how much of the variance in the dependant variable can be explained by the independent variable. It also gives an indication of the relative contribution of each independent variable (Pallant, 2001). The independent variables, social integration and academic integration, are continuous variables and were used to predict the dependent variable,
institutional and goal commitment, treated as a continuous variable. The control variables were, gender, race, classification, the student’s self reported current grade point average and the mother’s educational level. Multiple regression is appropriate in situations where researchers have scores on two or more measures for a group of individuals and want to determine how well a combination of these scores predicts an outcome (Gall, Gall, & Borg, 1999).
CHAPTER 4

RESULTS

This chapter presents the results of the statistical findings generated by the four research questions in two main sections. The first section includes descriptive statistics to analyze the demographic characteristics of the sample. The second section provides the results of the findings that analyzed track and field student-athletes’ social and academic integration experiences on institutional and goal commitment.

Demographic Characteristics of the Sample

Descriptive statistics are useful to identify demographic characteristics of the sample. Out of the 367 respondents, 156 (42.5%) were male, and 210 (57.2%) were female (see Table 4). In terms of year in school, there were 105 (28.6%) freshmen, 86 (23.4%) sophomores, 94 (25.6%) juniors, and 81 (22.1%) seniors/graduates. The category for senior and graduate student-athletes was combined due to the low number of respondents who stated they were graduate students (N=5). These data are presented in Table 4.1.

Table 4

Demographic Characteristics by Gender (N=367)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>156</td>
<td>42.5%</td>
</tr>
<tr>
<td>Female</td>
<td>210</td>
<td>57.2%</td>
</tr>
<tr>
<td>Missing Item</td>
<td>1</td>
<td>.3%</td>
</tr>
<tr>
<td>Total</td>
<td>367</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Table 4.2

**Demographic Characteristics by Classification (N=367)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>105</td>
<td>28.6%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>86</td>
<td>23.4%</td>
</tr>
<tr>
<td>Junior</td>
<td>94</td>
<td>25.6%</td>
</tr>
<tr>
<td>Senior/Graduate</td>
<td>81</td>
<td>22.1%</td>
</tr>
<tr>
<td>Missing Item</td>
<td>1</td>
<td>.3%</td>
</tr>
<tr>
<td>Total</td>
<td>367</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

As shown in Table 4.3, the respondents’ ages ranged from 17 to 24; however, the majority (69.0%) of the respondents was between 18 and 20 years of age.

Table 4.3

**Demographic Characteristics by Age (N=367)**

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>1</td>
<td>.3%</td>
</tr>
<tr>
<td>18</td>
<td>80</td>
<td>21.8%</td>
</tr>
<tr>
<td>19</td>
<td>81</td>
<td>22.1%</td>
</tr>
<tr>
<td>20</td>
<td>92</td>
<td>25.1%</td>
</tr>
<tr>
<td>21</td>
<td>62</td>
<td>16.9%</td>
</tr>
<tr>
<td>22</td>
<td>37</td>
<td>10.1%</td>
</tr>
<tr>
<td>23</td>
<td>9</td>
<td>2.5%</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>Missing Item</td>
<td>1</td>
<td>.3%</td>
</tr>
<tr>
<td>Total</td>
<td>367</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
The race/ethnicity composition of the survey respondents was divided into the following groups: African American, 113 (30.8%), Alaska native/Indian American, 0 (0%), Asian American, 5 (1.4%), Hawaiian/Pacific Islander, 0 (0%), Latino/Chicano/Hispanic American, 11 (3%), White American, 199 (54.2%), Other, 13 (3.5%), and International 23 (6.3%). Student-athletes who selected more than one race were grouped in the Other category. This information is presented in Table 4.4.

Table 4.4

<table>
<thead>
<tr>
<th>Demographic Characteristics by Race (N=367)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
</tr>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>African American</td>
</tr>
<tr>
<td>Alaska native/Indian American</td>
</tr>
<tr>
<td>Asian American</td>
</tr>
<tr>
<td>Hawaiian/Pacific Islander</td>
</tr>
<tr>
<td>Latino/Chicano/Hispanic American</td>
</tr>
<tr>
<td>White American</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>International</td>
</tr>
<tr>
<td>Missing Item</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Social and Academic Integration Experiences

How do track and field student-athletes rate the process of their own social and academic integration experiences? In general, the respondents rated highest (4.0 or higher) that their interpersonal relationships have been positively influenced by their peer-group interactions. The mean scores for track and field student-athletes (N= 367) on the social integration and academic integration items ranged from 4.40 (Since coming to this university I have developed close personal relationships with other students) to 2.03 (It has been difficult for me to meet and make
friends with other students). Of the 24 items, 19 or (79.1%) were rated above the midpoint of the scale (M = 3.00). Peer-group interaction subscale rated the highest (M=3.91, SD=.57). The item, “since coming to this university I have developed close personal relationships with other students,” (M = 4.40, SD = .78) was rated as the single highest mean. Academic and Intellectual Development subscale rated second highest (M=3.76, SD=.51). Of the 7 academic and intellectual development items, 3 were rated with a mean above 4.0. The item “I am satisfied with my academic experience at this university,” (M = 4.15, SD = .80) was rated with the highest mean within the academic and intellectual development subscale. Interaction with Faculty subscale rated third highest (M=3.65, SD=.69). Of the 5 items for faculty concern for student development and teaching, the item “Most faculty embers I have had contact with are genuinely interested in teaching,” (M= .91, SD=.74) was rated with the highest mean for this subscale. Faculty Concern for Student Development and Teaching subscale rated lowest (M=3.34, SD=.67). Of the 5 items for interactions with faculty, the item “My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes,” (M = 3.78, SD = .87) was rated with the highest mean for this subscale. The results are presented in Table 4.5

Table 4.5
Means and Standard Deviations of Track and Field Student-athletes’ Ratings of Integration Experiences from IIS (N=366)

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Group Interactions</td>
<td>3.91</td>
<td>.57</td>
<td>1 - 5</td>
<td>.73</td>
</tr>
<tr>
<td>Interactions with Faculty</td>
<td>3.65</td>
<td>.69</td>
<td>1 - 5</td>
<td>.80</td>
</tr>
<tr>
<td>Faculty Concern for Student Development &amp; Teaching</td>
<td>3.34</td>
<td>.67</td>
<td>1 - 5</td>
<td>.70</td>
</tr>
<tr>
<td>Academic &amp; Intellectual Development</td>
<td>3.76</td>
<td>.51</td>
<td>1 - 5</td>
<td>.61</td>
</tr>
</tbody>
</table>

Scale: 5=Strongly Agree, 4=Agree, 3=Not Sure, 2=Disagree, 1=Strongly Disagree

Social Integration by Gender, Race, and Classification

Are there differences in social integration of track and field student-athletes as a measure of gender, race, and classification? A three-way ANOVA was conducted to explore the impact of gender, race, and classification on social integration, as measured by the Institutional Integration Scales (IIS). Subjects were divided into the following groups: Gender (male and female); Race
(African American, White American, and Other); Classification (underclassmen and upperclassmen). The main effect for gender \(F(1, 350)=0.55; p=.460\) did not reach statistical significance. There was a statistically significant main effect for race \(F(2, 350)=5.12; p<.001\), however, the effect size was small (eta squared= .03). The Post-hoc comparisons using Tukey HSD test indicated that the mean score for White Americans (M=3.87, SD=0.51) was significantly different from the African American group (M=3.69, SD=0.50). The Other race category (M=3.77, SD=0.53) did not differ significantly from White Americans or African Americans. The main effect for classification \(F(1, 350)=1.07; p=.302\) did not reach statistical significance. The interaction effect for gender and race \(F(2, 350)=0.80; p=.450\) did not reach statistical significance. The interaction effect for gender and classification \(F(1, 350)=0.56; p=.454\) did not reach statistical significance. The interaction effect for race and classification \(F(2, 350)=0.58; p=.560\) did not reach statistical significance. The interaction effect for gender, race, and classification \(F(2, 350)=0.19; p=.828\). The results of this analysis are reported in Table 4.6.

**Table 4.6**

<table>
<thead>
<tr>
<th>Analysis of Variance Comparing Social Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
</tr>
<tr>
<td>Gender (G)</td>
</tr>
<tr>
<td>Race (R)</td>
</tr>
<tr>
<td>Classification (C)</td>
</tr>
<tr>
<td>G X R</td>
</tr>
<tr>
<td>G X C</td>
</tr>
<tr>
<td>R X C</td>
</tr>
<tr>
<td>G X R X C</td>
</tr>
<tr>
<td>Error</td>
</tr>
</tbody>
</table>

*Note. Values enclosed in parentheses represent mean square errors.*

*p < .01
Academic Integration by Gender, Race, and Classification

Are there differences in academic integration of track and field student-athletes as a measure of gender, race, and classification? A three-way ANOVA was conducted to explore the impact of gender, race, and classification on academic integration, as measured by the Institutional Integration Scales (IIS). Subjects were divided into the following groups: Gender (male and female); Race (African American, White American, and Other); and Classification (underclassmen and upperclassmen). The main effect for gender \([F(1, 350)=1.39; p=.240]\) did not reach statistical significance. There was a statistically significant main effect for race \([F(2, 350)=17.32; p<.001]\), however, the effect size was small (eta squared= .09). Post-hoc comparisons using Tukey HSD test indicated that the mean score for White Americans (M=3.71, SD=0.50) was significantly different from the African Americans (M=3.46, SD=0.43) and Others (M=3.35, SD=0.40). The main effect for classification \([F(1, 350)=0.90; p=.342]\) did not reach statistical significance. The interaction effect for gender and race \([F(2, 350)=1.38; p=.252]\) did not reach statistical significance. The interaction effect for gender and classification \([F(1, 350)=0.02; p=.892]\) did not reach statistical significance. The interaction effect for gender and classification \([F(2, 350)=0.30; p=.742]\) did not reach statistical significance. The interaction effect for race and classification \([F(2, 350)=0.57; p=.566]\) did not reach statistical significance. The results of this analysis are reported in Table 4.7.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>1.39</td>
<td>.240</td>
</tr>
<tr>
<td>Race (R)</td>
<td>2</td>
<td>17.32*</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Classification (C)</td>
<td>1</td>
<td>0.90</td>
<td>.342</td>
</tr>
<tr>
<td>G X R</td>
<td>2</td>
<td>1.38</td>
<td>.252</td>
</tr>
<tr>
<td>G X C</td>
<td>1</td>
<td>0.02</td>
<td>.892</td>
</tr>
<tr>
<td>R X C</td>
<td>2</td>
<td>0.30</td>
<td>.742</td>
</tr>
<tr>
<td>G X R X C</td>
<td>2</td>
<td>0.57</td>
<td>.566</td>
</tr>
<tr>
<td>Error</td>
<td>350</td>
<td>(.214)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Values enclosed in parentheses represent mean square errors.  
*p < .001
Institutional and Goal Commitment by Gender, Race and Classification

Are there differences in institutional and goal commitment in track and field student-athletes as a measure of gender, race, and classification? A three-way ANOVA was conducted to explore the impact of gender, race, and classification on institutional and goal commitment, as measured by the Institutional Integration Scales (IIS). Subjects were divided into the following groups: Gender (male and female); Race (African American, White American, and Other); and Classification (underclassmen and upperclassmen). The main effect for gender \( F(1, 350)=2.84; p=.093 \) did not reach statistical significance. The main effect for race \( F(2, 350)=1.86; p=.157 \) did not reach statistical significance. The main effect for classification \( F(1, 350)=0.77; p<.381 \) did not reach statistical significance. Post-hoc comparisons using Tukey HSD test indicated that the mean score for White Americans (M=4.45, SD=0.48), African Americans (M=4.38, SD=0.56) and Others (M=4.45, SD=0.44) were not significantly different from either group. The interaction effect for gender and race \( F(2, 350)=0.80; p=.451 \) did not reach statistical significance. The interaction effect for gender and classification \( F(1, 350)=0.05; p=.832 \) did not reach statistical significance. The interaction effect for race and classification \( F(2, 350)=0.25; p=.783 \) did not reach statistical significance. The interaction effect for gender, race, and classification \( F(2, 350)=0.64; p=.529 \) did not reach statistical significance. The results of this analysis are reported in Table 4.8.

Table 4.8
Analysis of Variance Comparing Institutional and Goal Commitment

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>2.84</td>
<td>.093</td>
</tr>
<tr>
<td>Race (R)</td>
<td>2</td>
<td>1.86</td>
<td>.157</td>
</tr>
<tr>
<td>Class (C)</td>
<td>1</td>
<td>0.77</td>
<td>.381</td>
</tr>
<tr>
<td>G X R</td>
<td>2</td>
<td>0.80</td>
<td>.451</td>
</tr>
<tr>
<td>G X C</td>
<td>1</td>
<td>0.05</td>
<td>.832</td>
</tr>
<tr>
<td>R X C</td>
<td>2</td>
<td>0.25</td>
<td>.783</td>
</tr>
<tr>
<td>G X R X C</td>
<td>2</td>
<td>0.64</td>
<td>.529</td>
</tr>
<tr>
<td>Error</td>
<td>350</td>
<td>(.253)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Values enclosed in parentheses represent mean square errors.

\( p=.05 \)
Influence of Social Integration and Academic Integration

To what extent does social integration and academic integration influence institutional and goal commitment after controlling for the background characteristics? This analysis was completed utilizing the summated scores generated from the 30 items from the Institutional Integration Scales. The $R^2$, or coefficient of determination, for model one (gender, race, classification, mother’s education and current grade point average) was .02. Therefore, the overall model explained 2.3% of the variance. After model two (social integration and academic integration), were included, the model as a whole explained 10.9% of the variance. The $R^2$ change was .09 which indicates a statistically significant contribution shown by the significant F change value (.000). The overall strength of the model as a whole was significant ($F(8, 302=4.47; p<.001$). The variables of social integration (beta=.15) and academic integration (beta=.21) made a statistical significant contribution to the model. This information is shown in Table 4.9.

<table>
<thead>
<tr>
<th>Table 4.9</th>
<th>Summary of Hierarchical Regression Analysis for Variables Predicting Institutional and Goal Commitment (N=302)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Model 1</td>
</tr>
<tr>
<td>Gender</td>
<td>B</td>
</tr>
<tr>
<td>Race</td>
<td>-0.02</td>
</tr>
<tr>
<td>Classification</td>
<td>-0.06</td>
</tr>
<tr>
<td>Mother’s Education</td>
<td>-0.02</td>
</tr>
<tr>
<td>Current GPA</td>
<td>0.05</td>
</tr>
<tr>
<td>Social Integration</td>
<td>0.15</td>
</tr>
<tr>
<td>Academic Integration</td>
<td>0.21</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
</tr>
<tr>
<td>F for change in $R^2$</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Note. Δ$R^2 = .09$

*p <.05. **p < .001.
Summary

This chapter has presented the results of the administration of the Institutional Integration Scales (Pascarella & Terenzini, 1980) to track and field student-athletes. The purpose of this study was to examine social and academic integration experiences of track and field student-athletes and to determine whether these experiences influence their institutional and goal commitment to institutions within the Atlantic Coast Conference (ACC). Survey responses from student-athletes who attended ten institutions within the ACC were analyzed using three-way ANOVA to determine if there were significant mean differences in student-athletes’ social integration, academic integration, and institutional and goal commitment experiences based on gender, race, and classification.

There were significant mean differences among track and field student-athletes’ social integration and academic integration when race was examined. Multiple comparisons of social integration revealed there was a significant difference between African Americans and White Americans, where White Americans rated higher in social integration than African Americans. Multiple comparisons of academic integration revealed there was a significant difference in academic integration when race was examined. White Americans were statistically different from African Americans and Other race. No statistically significant results emerged when analyzing social integration and academic integration when measured by gender and classification.

Hierarchical multiple regression was utilized to assess how social and academic integration adds to the predication of institutional and goal commitment, after background variables were controlled for. The results revealed that academic integration and social integration had a significant positive effect on institutional and goal commitment.

Overall, the data analysis allowed for the development of a procedure that can be used to support student-athletes’ integration experiences, which leads to stronger institutional and goal commitment. The next chapter provides a discussion of the study findings, including implications for athletic department and university administrators. The chapter will conclude with recommendations for future research in the area of student-athlete persistence.
CHAPTER 5

DISCUSSION

This study was designed to examine the social and academic integration experiences of track and field student-athletes and to determine whether these experiences influenced their goal and institutional commitment. The conceptual basis for the study and the research questions were derived from the theory of student individual persistence and departure as described by Tinto (1993). Although researchers describe a number of variables affecting persistence, two variables have consistently been identified to predict persistence: the student’s ability to integrate academically and socially and the student’s commitment to degree attainment. The gap in empirical studies lies in the relationship between integration and commitment to degree. Moreover, can the same persistence investigations be applicable to student-athletes? There exists a significant body of research addressing academic variables and student-athletes; however, my interest was in understanding the effects of social and academic integration variables has on a student-athlete’s goal and institutional commitment.

From the literature review, the variables of social integration and academic integration were identified as consistent measures of student persistence among the traditional four-year institution population. However, social and academic integration were shown to be less reliable measures among the two-year college students, commuters, nontraditional students, and students considered to be high-risk. The objective of the present research was to learn how integration variables affected goal and institutional commitment of this subgroup of student-athletes (ACC track and field athletes). This final chapter will discuss the data analyses, as well as present implications of the findings for higher education administrators and collegiate directors of athletics. Recommendations for revisions to this study for future research will also be discussed.

Social Integration and Academic Integration Experiences

Involvement in the campus community and integration into the academic and social fabric of the campus can affect persistence by enhancing a student’s commitment to a course of study and to the institution. Positive interactions and experiences tend to enhance integration; conversely, negative interactions and experiences tend to reduce integration (Pascarella & Terenzini, 1991). Tinto postulates that one can conceivably have no effect on the other, but
inevitably each becomes interdependent on the other. Basically, students can function within an institutional environment and integrate into only one system, but there will be some consequences if integration into both systems is not successful.

This investigation demonstrated a range of opinions concerning integration experiences. A rank order of social integration and academic integration subscales revealed varying degrees of integration experiences. Student-athletes rated highest on the integration subscale, Peer-Group Interactions, where student-athletes had developed close personal relationships with other students, and the friendships have been personally satisfying. Participants rated the lowest on the integration subscale, Faculty Concern for Student Development and Teaching. This finding was similar to that described by Schutt (1996), where student-athletes in non-revenue sports were found to be more positive about their interactions with other students than were student-athletes in revenue sports.

In general, peer-group interaction can have a positive outcome. Interaction among students can influence day-to-day relations, which can in turn influence study habits and ultimate academic performance. In previous studies, researchers indicated that peer support is one of the best predictors of student persistence or withdrawal (Allan, 1992; Flowers, 2004; Pascarella & Terenzini, 1980). When students surround themselves with those who have similar aspirations, their motivation to achieve increases and so does the likelihood that they will persist and graduate from the institution.

**Social Integration**

The findings revealed that there was a significant mean difference in social integration when race was considered. White American track athletes rated higher in their social integration experiences than African American track athletes. This finding was incongruent with the findings of Blanco (1989). According to Blanco (1989), the effect of race/ethnicity on social integration was unclear. However, the overall results of Blanco’s study suggested that race/ethnicity of the participants in the study was not a factor that interacted with institutional commitment and therefore did not impact on social integration or persistence decisions. Conversely, the findings of the current study are congruent to previous research conducted by Janes (1993), Thompson (1994), Lavine (1992), and Downing (2005). Most noteworthy is the study conducted by Downing (2005), where African American students were not experiencing a sense of belonging inside the classroom. This trickles over into the social system, because if
students are not making connections with faculty inside the classroom, then the chances of developing relationships outside the classroom are slim-to-none. The literature does suggest that student/faculty interaction is a leading factor in student satisfaction and can be viewed as a powerful persistence and retention tool (Douglas, 1998; Flowers, 2004; Feagin, Vera, & Imani, 1996; Lang & Ford, 1992).

There was not a significant difference in social integration when gender was analyzed. This finding was congruent with some research studies (Blanco, 1989; Ferrer, 1997; Liu & Liu, 2000). Blanco (1989) found that gender did not contribute to student’s overall social integration, but it played a significant role in peer-group interactions. However, this finding was incongruent with prior research studies, where gender contributed to social integration (Thompson, 1994; Voorhees, 1987). The reason for the mixed findings of the impact of gender on social integration may be attributed to the type of research design, the population studied, and social aspects surrounding the time period when the study was conducted. Moreover, the differences in the findings may be due, in part, to a reaction to the increasing presence of women on college campuses, particularly in four-year institutions where they are now often the gender majority. In addition, women are increasingly entering traditionally male dominated fields of study and are seeking leadership positions in professional groups.

According to Tinto (1975), students at institutions for a longer period of time (i.e., upperclassmen) should exhibit higher social integration scores based on their length of enrollment. A new student would not have had enough time to establish complex social interactions. If Tinto was correct about the connection between year in school and level of social integration, then underclassmen’s social interaction scores should have been lower than the upperclassmen’s scores. However, findings of the current study found no significant difference in social integration when classification was analyzed. Therefore, either the instrument used to measure social integration was unable to discriminate between the groups, or Tinto’s contention that social integration is at least partly a function of time at the institution may not apply to collegiate student-athletes.

Considering the majority of the literature focuses on academic and social integration systems of first year students, there was a dearth of literature that analyzed social integration beyond the freshman year, in turn; the current study had to rely on research similar to that conducted by Howell (1999). The findings in the current study are similar to the findings of Howell (1999). Howell analyzed responses from the Institutional Integration Scale (Pascarella &
Terenzini, 1980) of upperclass students, which reported the social integration subscale of peer-group interaction did not contribute to individual decisions to persist. Pascarella and Terenzini (1980) found that “sample scores on scales concerned primarily with the quality and impact of student-faculty relationships made greater estimated contributions to the prediction of subsequent decisions to persist or withdraw than did scores on the scale concerned with students’ peer relationships” (Pascarella & Terenzini, 1980, p. 72).

Peer-Group interactions might be an important aspect of a new student’s experience during the stages of transition and incorporation into a new college community. As a student becomes incorporated and integrated into the academic and social systems of the college community, the importance of Peer-Group interaction appears to lessen as compared to interactions with faculty.

**Academic Integration**

Academic integration represents the quality of interactions between students and faculty, students’ perception of faculty concern for student development and teaching, and students’ perceptions of his or her academic and intellectual development (Pacarella & Terenzini, 1980). The results of this study reveal no statistical significance in academic integration when measured by gender. This finding is inconsistent with the findings of Ferrer (1997) where females at a community college indicated a higher rate of academic integration than did the male students. One possible explanation of higher academic integration level of females may be related to the “comfort level” they feel. In the current study, 57.2% of the respondents were female track and field student-athletes, whereas the male composition was 42.5%. This finding contradicts the opinions of Astin (1993), where women have a “comfort level” and referres to the importance of women and minority groups reaching a critical mass before the impact of those groups are felt and accepted. Furthermore, this finding is inconsistent with the research of Burns (1994), where the gender of students enrolled in institute of religion programs had the greatest effect on persistence.

Previous researchers had indicated that male students tended to persist at higher levels than female students (Astin, 1975; Cope, 1971; Spady, 1970; Tinto, 1975). Arguably, research findings have been mixed with regard to the effect of gender on persistence behavior. For example, in a study of first-year students at York University in Canada, Grayson (1996) found
gender to be a useful predictor of voluntary withdrawal. In other research, desisters cited “gender as a factor influencing their decision to enroll in or depart from college” (Nordquist, 1993, p. 22).

The current study revealed a significant difference when examining academic integration when measured by race. White American track athletes rated higher in their academic integration experiences than African American track athletes. Additionally, the findings showed a significant mean difference in academic integration of the White American student-athletes and individuals selecting the Other race category, whereas White American track athletes rated higher in their academic integration experiences than Other race track athletes. This finding is similar to that described in earlier studies such as Blanco (1989), Lavine (1992), Thompson (1994), and Downing (2005). However, findings from the current study contradict the findings of Ferrer (1997), who indicated Hispanic students showed a higher academic integration than Black Non-Hispanic and White Non-Hispanic students enrolled at a community college. Findings from Downing (2005) revealed that integrating into the academic system at a predominately White institution (PWI) is problematic for African American students. These findings, along with the current study, give credence to Tinto’s theory of “critical mass” and the supportive effects of minority subcultures. Tinto (1993) noted, “The absence of compatible student groups does appear to undermine the likelihood of persistence” (p. 60). The finding of significant differences when analyzing social integration and academic integration as a function of race may indicate that these constructs may be defined differently by African American track and field student-athletes than it was by the original population that was used in the development of the IIS (Pascarella & Terenzini, 1980), which was developed based on a population of mostly White male and female students.

Whether it is academic and intellectual development or faculty concern for student development and teaching, a disconnect between the student and the academic system will have an influence on the student’s commitment to receiving a degree from the institution. Previous research has shown that the quality of student-faculty interactions is as important as the quantity of interactions, and student-faculty interactions are critical to student retention. Opportunities for students to engage in quality interactions and relationships with faculty who exhibit respect and concern for students is important and necessary regardless of race.

Additionally, the present research found no significant mean differences in academic integration based on the year in school of the track and field student-athletes. This finding is inconsistent with the findings of Howell (1999). As mentioned earlier, the majority of the
literature focuses on the academic and social integration systems of first year students, and there was a lack of literature that analyzed academic integration beyond the freshman year. Therefore, the current study had to rely on research similar to that performed by Howell (1999). Howell stated that academic integration was a clear risk factor for upperclassmen and found significant differences among persisters and desisters with regard to Interactions with Faculty and Academic and Intellectual Development.

A possible reason the findings of this study did not support the findings of previous studies is that perhaps these student-athletes feel that the faculty do have an interest in them as a student and are willing to spend time outside the classroom with them, and/or show interest in assisting them develop in more than just academic areas, regardless of their year in school. Additionally, the participants perceive that faculty members are genuinely interested in students and teaching.

Influence of Institutional and Goal Commitment

Tinto (1993) suggested that a student’s level of Institutional and Goal Commitment was directly related to the student’s level of social and academic integration. Institutional and goal commitment refers to the student’s level of commitment to remain at the institution until degree completion. The results of this study, in part, support Tinto’s conceptual framework, which guided this study. Social integration and academic integration of track and field student-athletes significantly influenced their institutional and goal commitment. The results of the current study also are consistent with the findings of Lavine (1992), however, these results are inconsistent with a study conducted by Hyatt (2001) in which student-athletes demonstrated a positive commitment toward extending their athletic careers but also displayed a negative commitment to attaining a degree.

Tinto’s model proposed that a student’s family background, skills and abilities, and prior schooling influence institutional and goal commitment levels. He postulated that educational and institutional commitments are “important predictors of and reflections of the person’s experiences in that collegiate environment” (Tinto, 1975, p. 96). However, the results of this study revealed the contrary. Background characteristics of track and field student-athletes were not seen to influence institutional and goal commitment; social integration and academic integration were the factors that significantly influenced institutional and goal commitment. Upon entering the institution, a student’s intentions to degree attainment interacts with the
academic system represented by academic performance and faculty/staff interactions. At the same time, the student’s institutional and goal commitment interacts with the institutional social system, represented by extracurricular activities and peer-group interactions. The student develops a level of academic and social integration, and subsequent persistence decisions are made on the revised institutional and goal commitments.

In this study, Tinto’s (1993) model was adapted to track and field student-athletes with the objective to examine social integration and academic integration. Integration or lack of integration was theorized to affect institutional and goal commitment, and subsequently impact the student’s persistence decisions. Following Tinto’s argument, the greater the integration, the greater the commitment to the institution and degree completion.

Tinto’s model was found to be useful in explaining student-athlete’s integration experiences with institutional and goal commitment. Together, social integration and academic integration significantly influence institutional and goal commitment. Academic integration emerged as having the strongest influence on institutional and goal commitment. Similar results were reported in previous studies by Lang, Dunham, and Alpert (1988), Blanco (1989), Ross (1992), English (1993), and Thompson (1994). In testing Tinto’s model, previous researchers concluded that academic integration had the strongest direct effect on institutional and goal commitment and/or persistence.

Social integration achieved through interactions between the student-athlete’s institutional social system and institutional commitment produced influence on institutional and goal commitment. Benefits in the form of interactions with peers, interactions with faculty, and social opportunities are important for social congruence. Realization of these benefits resulted in a positive interaction between institutional and goal commitment and the social system, which fostered high levels of social integration.

Intentions toward earning a degree are defined not only by the declaration of a course of study but also by other specific actions or focused intentions from the student (Tinto, 1993). It appears that higher levels of academic and social integration enhances the strength of institutional and goal commitment. Tinto (1993) noted “the absence of integration appears to evolve from incongruence, a lack of institutional fit and isolation, absence of sufficient interactions whereby integration may be achieved” (p. 50). All student-athletes are required to be full-time students, participate in mandatory academic advisement, demonstrate degree progress, and maintain a minimum grade point average. In addition to the academic foundation
prescribed for all student-athletes, track and field student-athletes must abide by rigorous training sessions during the fall months and a relatively long competition season that spans from January and continues through June. One would assume that the time demands of their class schedule and of practice and competition would hinder the integration process and negatively affect their commitment to the institution. The findings of the current study prove the contrary, and reported the unexpected results that participants rated above average in their integration experiences, especially socially as well as in institutional and goal commitment. These findings indicate that track athletes were able to make friends easily and these friendships were meaningful; they were able to grow intellectually through interactions with faculty; they were able to participate in study groups, meet with faculty outside of class time, and used the library for research; were pleased with their decision to enroll at the institution; and an overwhelming majority would enroll at the institution next fall if they were not graduating. These findings may be attributed to the time the study was conducted. The track athletes were ending their fall training season and had not yet begun the competition season; therefore most of the student-athletes were not dealing with the stress of preparing mentally for high-level competitions, were not traveling to off-campus competitions, missing class time, or turning in missed assignments while maintaining current class work. Pre-competition season allows more time for student-athletes to be involved academically and to participate in social opportunities on campus.

Implications

Implications based on the findings of this study suggest that, most of the research conducted on the topic of collegiate athletics emphasizes the academic welfare of student-athletes and pays little attention to ways of enhancing the experience of student-athletes that assures them a well-rounded and quality educational experience that will precipitate student-athlete persistence. Moreover, there are books highlighting the effects of athletics on campuses, for example, Zimbalist’s (1999) Unpaid Professionals, Duderstadts’ (2003) Intercollegiate Athletics and the American University, Adler Adler’s (1991) Backboards and Blackboards and Lachick’s (2002) Smashing Barriers. The literature has not addressed how student-athletes themselves evaluate their college experiences as college students and whether these experiences relate to institutional commitment.

The results from this study suggest that track and field student-athletes are highly integrated socially and academically and express a high commitment to earning a degree from
their institutions in the Atlantic Coast Conference. These results clearly undercut claims of some critics that student-athletes are exploited or denied the opportunity to be “real” students. Equally, being “real” students includes being provided the opportunity to take part in academic activities, such as internships or study abroad. Certainly these opportunities are valuable components of a student’s overall education. At the same time, these activities often interfere with competition schedules and the need to train to stay competitive. Being mindful of the dynamics of athletic participation, particularly in team sports, college athletics can be an obstacle to pursuing such opportunities. Perhaps some way could be developed so that college directors of athletics could allow student-athletes to take time off from their athletic responsibilities— a kind of “redshirt” season. This redshirt should require provision of an athletics scholarship that explicitly does not count against a team’s scholarship limits, should not count against a student-athlete’s five-year clock, and explicitly should require that a student-athlete not participate in sport activities, including practice and team meetings.

The study revealed that peer-group interactions had the highest rating of integration experiences. Implications of promoting favorable partnerships with other student-athletes as well as students who are not athletes will assist with increasing the opportunity to fully integrate into the social system of the institution. The results of this study suggest the scope of student-athletes’ influence on one another is enormous, ranging from their athletic lives to their academic lives and onto their personal lives. Peer groups serve to help students achieve independence from home and family; and offer student-athlete emotional support and fulfill needs not met by athletic competition, classroom curriculums, or coaches. This study provided insight to the dynamics of peer groups for student-athletes. Peer groups can challenge old values, provide intellectual stimulation, and act as sounding boards for new viewpoints, present new information and new experiences to student-athletes, suggest new career possibilities, and provide emotional support.

In observing social integration and academic integration, differences were found between racial groups. Although White American track and field student-athletes reported higher scores than African American track and field student-athletes, both groups’ scores averaged above the mid-point. In observing academic integration, differences were found between White American athletes, African American athletes, and the Other racial category. White Americans reported the highest academic integration scores, whereas, Others rated the lowest academic integration scores. According to Tinto (1987), assimilation is the successful academic and/or social
integration experiences of students. It does not occur if students have little interactions with college personnel, feel isolated from the daily life of the institution or perceive themselves substantially at odds with the institution. Some factors which may distinguish between the races may be: (a) the minority student body population at each institution may impact interaction with the majority race; (b) the racial composition of the faculty that should ensure quality student-athlete/faculty interactions both inside and outside the classroom; and/or (c) the availability to partake in cultural and ethnic diversity event.

In observing institutional and goal commitment, the study revealed no differences emerged between gender, race, or classification. Institutional and goal commitment is the student-athlete’s commitment toward the institution at which they are enrolled and the willingness to achieve the goal of earning a degree from that specific institution. These findings imply that these respondents do not differ by gender, race, nor classification in the level of their commitment to the institutions they are enrolled and their desire to obtain a degree for that specific institution.

When held at a constant, specific background characteristic such as, race, gender, classification, mother’s educational level, and self-reported high school grade point average did not contribute to student-athlete’s institutional and goal commitment. However, the level of social integration and academic integration significantly influenced institutional and goal commitment. The commitment of student-athletes to the institution appears to be directly linked to the quality of the athlete’s education broadly conceived. The results of this study suggest that student-athletes who perceive themselves as having established capable membership (socially, academically, and athletically), and having grown in the process, are more likely to express a strong commitment to the institution. Tinto (1993) indicates, “Persistence arises from the social and intellectual rewards accruing to competent membership in the communities of the college and from the impact that membership has upon individual goal and commitments, especially commitment to the institution” (p. 208).

**Suggestions for Future Research**

The numerous research studies generated by Tinto’s model of individual departure present clear evidence of the need to continue exploring the dynamics of social and academic integration, and the impact of institutional and goal commitment that precipitates persistence of student-athletes. Unlike some studies, the results of this study supported the perceptions of social
and academic integration as having a statistically valid place within Tinto’s model. This result alone merits further exploration of college persistence to include student-athletes within the college student population. Below are some suggestions for future research.

**Continue to develop the institutional integration scales.** It is recommended for future research that additional steps be taken to improve the Institutional Integration Scales. The instrument designed by Pascarella and Terenzini (1980) was continuously modified over a span of several years to improve its predictive quality. It is recommended that future studies examining integration of student-athletes would be better served by utilizing a validated survey instrument that includes variables specific to student-athletes (e.g., aspirations and expectations, academic preparation, athletic participation, recruitment experiences, and physical and emotional health). The inclusion of additional variables, or exclusion of the present variables, and the impact that they have on the reliability and validity of the scale should be examined. It is also recommended that the present scale be validated on various sport teams from different athletic conferences across the country. The respondents of this survey may not fully represent the entire student-athlete population.

**Conduct the study using alternative methodologies.** Advocating the qualitative approach to the study of student retention, McKeown, MacDonnell, and Bowman (1993) presented their own challenges to Tinto’s interpretation of Durkheim’s (1950) work on suicide and criticized Tinto’s theory for its weak link to the empirical world of retention research. They suggested that Tinto’s concepts loosely guide the development of more accurate theories. In order to do this, these researchers encouraged the use of qualitative methodological techniques to examine the complex social life of colleges and universities from the point of view of the student as an actor. The qualitative approach should allow for insights not confined only to quantitative items. Future research would benefit from a qualitative design where student-athletes were encouraged to express their thoughts, feelings, and opinions concerning their collegiate experiences.

It may also be beneficial to consider conducting the study longitudinally to explore variables that might affect student-athlete persistence across the four to five year arc of college life between freshman year and graduation. There is a need for detailed cohort studies in which investigators begin to follow cohorts of student-athletes in the first year and continue through graduation in order to document factors that cause student-athletes to continue or discontinue in college education, with regard to gender, race, pursuit of athletic careers,
satisfaction/dissatisfaction with major, or satisfaction/dissatisfaction with their athletics experiences.

Conduct the study to include non-student-athletes. As a unique group or culture, the student-athlete population has demands different from (and in addition to) their non-athlete counterpart. In describing the research regarding the factors in student-athlete persistence, Gordon (1986) indicated the research affecting student-athletes has not established any clear patterns of academic, personal, or career development. Distinctively, McLaughlin (1986) found a number of quantitative studies on college athletes that focus on various personality factors, but generally reveal few differences between athletes and non-athletes. Future research in this area would be beneficial to practitioners and administrators in educational institutions to better understand how the characteristics of student-athletes interact with non-student-athletes.

Conclusion

According to Tinto (1993) “An institution’s capacity to retain students is directly related to its ability to reach out and make contact with student and integrate them into the social and academic fabric of institutional life” (p. 204). Persistence hinges on the establishment of a healthy, caring educational environment which enables all individuals to find a niche in one or more of the many social and academic areas of the institution. To single out the institution as being solely responsible for student departure is to deny the principle that students must themselves become responsible for their own learning. Students play a vital role in helping themselves integrate into the academic and social systems of the institution. However, student-athletes are challenged to find ways of maximizing their involvement and learning in both academic and athletic domains and doing so in an effective and efficient manner.

This study has examined the effects of integration experiences of student-athletes to their level of institutional and goal commitment. The importance of social integration and academic integration was influential to institutional and goal commitment. The results of this study provided useful insight into the college experience of track and field student-athletes attending institutions of the Atlantic Coast Conference. Track and field student-athletes’ perceptions of their integration into college are a necessary piece of the puzzle. The more administrators know, the more they can structure an optimally successful experience for student-athletes. This study has added to the growing body of literature of student-athlete persistence and should be welcomed by all those who are interested in college athletics at any level. Future research should
build upon what was found in this study to further increase the understanding of student-athlete integration and commitment, and the student-athlete environment as a whole.
APPENDIX A

HUMAN SUBJECTS APPROVAL
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8633 · FAX (850) 644-4392

REAPPROVAL MEMORANDUM

Date: 11/2/2006

To:
Aundrea Lyons
2449 Needle Palm Way
Tallahassee, FL 32309

Dept.: SPORT MANAGEMENT/PHYSICAL ED.

From: Thomas L. Jacobson, Chair

Re: Reapproval of Use of Human subjects in Research:
An Assessment of Academic and Social Integration Among Student Athletes

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 10/31/2007 please request renewed approval.

You are reminded that a change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must report to the Chair promptly, and in writing, any unanticipated problems involving risks to subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols of such investigations as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: Jerome Quartersman
HSC No. 2006.0967-R
APPENDIX B

COVER LETTER
November 29, 2006

Dear Participant:

I am currently in the process of collecting data for my doctoral dissertation in Sport Administration. My dissertation topic is on the academic and social integration of student-athletes. I am seeking your assistance in helping me reach this goal.

Please take approximately 10 minutes to complete the attached survey. I am sure you will find the questions both interesting and informative. The information you provide will be held in strict confidence and the data reported will be anonymous. Attached is a consent form describing the details of the study and advising you of your rights as a participant in this study.

To show my appreciation for your willingness to take part I this study I will make available a summary of the results upon your request. Simply contact me, Coach Harlis Meaders, or Dr. Jerome Quarterman and a summary will be mailed to you. Thank you again for assisting me with this very important research project.

If you have any questions, please contact me at (850) 445-6185 or Coach Harlis Meaders at (850) 644-6186, or Dr. Jerome Quarterman at (850) 644-9560.

Sincerely,

Andi Lyons

Andi Lyons
Doctoral Candidate
Florida State University

Harlis J. Meaders
Associate Head Track & Field Coach
Florida State University

Dr. Jerome Quarterman
Dissertation Chair
Florida State University
APPENDIX C

LETTER OF INFORMED CONSENT
Informed Consent Form

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled "An Assessment of Academic and Social Integration among Collegiate Student-Athletes."

Aundrea L. Lyons, who is a doctoral candidate at Florida State University, is conducting this research. I understand the purpose of her research project is to analyze my perceptions of student-athlete integration.

I understand I will be asked to fill out paper and pencil questionnaires. The total time commitment would be about 15 minutes. My questions will be answered by the researcher, Aundrea L. Lyons.

I understand my participation is totally voluntary and I may stop participation at anytime. All my answers to the questions will be kept anonymous and identified by a subject code number. My name will not appear on any of the results. No individual responses will be reported. Only group findings will be reported.

I understand there is a possibility of a minimal level of risk involved if I agree to participate in this study. I am also able to stop my participation at any time I wish.

I understand there are benefits for participating in this research project. First, this survey is an effective way to offer suggestions and comments that may influence the direction of future programs. Also, peer review is a way to assess the athletic department and the university’s approach to addressing the holistic needs of their student-athletes.

I understand that this consent may be withdrawn at any time without prejudice, penalty or loss of benefits to which I am otherwise entitled. I have been given the right to ask and have answers any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand the information obtained during the course of the study will remain anonymous, to the extent allowed by law.

I understand that I may contact Aundrea L. Lyons, 2449 Needle Palm Way, (850) 445-6185, or Ms. Lyons’ major professor, Dr. Jerome Quarterman at (850) 644-9560 for answers to questions about this research or my rights. Group results will be sent to me upon my request.

I understand that I may contact the Institutional Review Board (IRB) Human Subjects Committee Chairman at 2035 E. Paul Dirac Drive, Box 15, 100 Stiger Bldg., Innovation Park, Tallahassee, FL 32310, (850) 644-8633.

I have read and understand this consent form.

(Participant) ___________________________ (Date) ___________________________
# Track and Field Social and Academic Integration Survey

For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience: **PLEASE ANSWER ALL QUESTIONS!**

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<tbody>
<tr>
<td>1.</td>
<td>Since coming to this university I have developed close personal relationships with other students</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>My non-classroom interactions with faculty have had a positive influence on my personal growth, values and attitudes</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Few of the faculty members I have had contact with are generally interested in students</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>I am satisfied with the extent of my intellectual development since enrolling in this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>5.</td>
<td>I am confident that I made the right decision in choosing to attend this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>6.</td>
<td>The student friendships I have developed at this university have been personally satisfying</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>7.</td>
<td>My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>8.</td>
<td>Few of the faculty members I have had contact with are generally outstanding or superior teachers</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>9.</td>
<td>My academic experience has had a positive influence on my intellectual growth and interest in ideas</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10.</td>
<td>It is likely that I will register at this university next fall</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>11.</td>
<td>My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>12.</td>
<td>My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>13.</td>
<td>Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>14.</td>
<td>I am satisfied with my academic experience at this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Not Sure</td>
<td>Disagree</td>
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<tr>
<td>15.</td>
<td>It is important to me to graduate from this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>16.</td>
<td>My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>17.</td>
<td>Since coming to this university I have developed a close, personal relationship with at least one faculty member</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>18.</td>
<td>Most of the faculty members I have had contact with are interested in helping students grow in more than just academic areas</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>19.</td>
<td>Few of my courses this year have been intellectually stimulating</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>20.</td>
<td>I have no idea at all what I want to major in</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>21.</td>
<td>It has been difficult for me to meet and make friends with other students</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>22.</td>
<td>I am satisfied with the opportunities to meet and interact informally with faculty members</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>23.</td>
<td>Most faculty members I have had contact with are genuinely interested in teaching</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>24.</td>
<td>My interest in ideas and intellectual matters has increased since coming to this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>25.</td>
<td>Getting good grades is not important to me</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>26.</td>
<td>Few of the students I know would be willing to listen to me and help me if I had a personal problem</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>27.</td>
<td>I am more likely to attend a cultural event (i.e., concert, lecture, art show) now than I was before coming to this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>28.</td>
<td>It is not important to me to graduate from this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>29.</td>
<td>Most students at this university have values and attitudes different from my own</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>30.</td>
<td>I have performed academically as well as I anticipated I would</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
About You
Please check or write in the appropriate response for the following items:

1. Female _____  Male _____

2. Your Race (please mark one):
   _____ African-American
   _____ Alaska native/Indian American
   _____ Asian American
   _____ Hawaiian/Pacific Islander
   _____ Latino/Chicano/Hispanic-American
   _____ White American
   _____ Other
   International ______________________________
      (Origin)

3. Age _________

4. Year in college __________

5. Current GPA _______

6. Do you receive financial aid? Yes _____ No _____

7. Type of student-athlete: Recruited _____ Walk-on _____

8. Do you receive an Athletic scholarship? Yes _____ No _____
   If yes, what type? Full Athletic scholarship _______ Partial Athletic scholarship ______

9. What is the highest level of education did your parents receive (circle one):
   Father:  Mother:
   Graduate degree  Graduate degree
   College degree  College degree
   Some College  Some College
   High School Diploma  High School Diploma
   GED  GED
   Lower than High School  Lower than High School

10. What is your primary event area?
    Sprints  _______
    Hurdles  _______
    Jumps  _______
    Throws  _______
    Mid Distance  _______
    Distance  _______
    Multi’s  _______

THANK YOU FOR YOUR TIME AND COOPERATION!
APPENDIX E

INSTITUTIONAL INTEGRATION SCALES
(Pascarella & Terenzini, 1980)
### Institutional Integration Scales
(Pascarella & Terenzini, 1980)

#### Peer-Group Interactions

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Since coming to this university I have developed close personal</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>relationships with other students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The student friendships I have developed at this university have removal</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>been personally satisfying</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. My interpersonal relationships with other students have had a</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>positive influence on my personal growth, attitudes, and values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. My interpersonal relationships with other students have had a</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>positive influence on my intellectual growth and interest in ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. It has been difficult for me to meet and make friends with other</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Few of the students I know would be willing to listen to me and</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>help me if I had a personal problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Most students at this university have values and attitudes different</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>from my own</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Interactions with Faculty

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My non-classroom interactions with faculty have had a positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>influence on my personal growth, values and attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. My non-classroom interactions with faculty have had a positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>influence on my intellectual growth and interest in ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. My non-classroom interactions with faculty have had a positive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>influence on my career goals and aspirations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Since coming to this university I have developed a close, personal</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>relationship with at least one faculty member</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I am satisfied with the opportunities to meet and interact informally</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>with faculty members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Faculty Concern for Student Development and Teaching

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Few of the faculty members I have had contact with are generally</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>interested in students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Few of the faculty members I have had contact with are generally</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>outstanding or superior teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Few of the faculty members I have had contact with are willing to spend</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>time outside of class to discuss issues of interest and importance to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Most of the faculty members I have had contact with are interested in</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>helping students grow in more than just academic areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Most faculty members I have had contact with are genuinely interested</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>in teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Academic and Intellectual Development

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am satisfied with the extent of my intellectual development since</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>enrolling in this university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. My academic experience has had a positive influence on my intellectual</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>growth and interest in ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am satisfied with my academic experience at this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. Few of my courses this year have been intellectually stimulating</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. My interest in ideas and intellectual matters has increased since</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>coming to this university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I am more likely to attend a cultural event (i.e., concert, lecture,</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>art show) now than I was before coming to this university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I have performed academically as well as I anticipated I would</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### Institutional and Goal Commitments

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am confident that I made the right decision in choosing to attend</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>this university</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. It is likely that I will register at this university next fall</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. It is important to me to graduate from this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I have no idea at all what I want to major in</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Getting good grades is not important to me</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. It is not important to me to graduate from this university</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
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REFERENCES


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English, K. M. (1993). The role of support services in the integration and retention of college students who are hearing impaired. *Dissertation Abstracts International, 54*(06), 2114. (UMI No. 9330340)


BIOGRAPHICAL SKETCH

EDUCATION

Florida State University, Tallahassee, Florida
Ph.D. in Sport Administration, August 2007
  Dissertation Title: An Assessment of Social and Academic Integration among
  Track and Field Student-Athletes of the Atlantic Coast Conference

Mississippi State University, Starkville, Mississippi
M.S. in Sport Administration, June 1996

Florida State University, Tallahassee, Florida
B.S. in Communication, August 1992

PROFESSIONAL EXPERIENCE

Research Assistant
Florida State University
Sport Management, Recreation Management, & Physical Education Department
May 2005 - December 2006
  • Assisted professor in research and publication writing
  • Analyzed data sets
  • Assisted in class preparation
  • Prepared power point presentations
  • Administered exams to student

City Commission Aide to Allan Katz,
City of Tallahassee - Tallahassee, FL
January 2004- May 2005
  • Researched, analyzed and briefed the commissioner on city government issues
  • Assisted the commissioner in managing budget
  • Represented the commissioner at city meetings
  • Coordinated general complaints from citizens with other city departments
  • Prepared city government reports, memoranda, and letters
  • Managed the commissioner’s calendar

Coordinator for Academic Support Services
Florida State University Athletic Department - Tallahassee, FL
August 1999- January 2004
  • Advised and counseled men’s and women’s track and cross country teams on
    academics and student life
  • Coordinated athletic admissions and served as athletic liaison to the Office of
    Admissions
  • Served as primary contact person for the National Collegiate Athletic Association
    (NCAA) Initial-Eligibility Clearinghouse
• Represented the athletic academic support services to the Athletic Compliance Office, the Registrar’s Office, International Student Center, Office of Orientation, and Thagard Health Center (Immunization & Records)
• Developed and implemented initial-eligibility, continuing-eligibility, and FSU admissions instructional flow charts for athletic administrators and coaches
• Evaluated junior college, community college, and high school transcripts for preliminary admission status to the university and disseminated reports to athletic administrators and coaches

Assistant Track Coach/Women’s Team Coordinator
Florida State University- Tallahassee, FL
November 1996- August 1999
• Coordinated women’s recruiting
• Budgeted and proposed athletic scholarships
• Coordinated team travel
• Developed team discipline plan
• Coached sprints and relays events

Assistant Track Coach
Mississippi State University- Starkville, MS
August 1992- November 1996
• Coordinated team recruiting efforts
• Performed public relations duties in absence of head coach
• Managed meet preparation
• Organized on-campus faculty meetings
• Coached sprints, jumps, and throwing events

TEACHING EXPERIENCE

Instructor, Florida State University Dean of Students Department
• First Year Experience (AMS 1363), Fall 2006

Teaching Assistant, Florida State University
Sport Management, Recreation Management, & Physical Education Department
• Aerobic Conditioning (PEM 1141), Fall 2005, Spring 2006
• Aerobic Dance (PEM 1171), Fall 2006
• Volleyball (PEM 1321), Fall 2006
CONFERENCE PRESENTATIONS

“Increasing Effective Relationships in Advising African-American Student-Athletes,” National Association for Athletic Academic Advisors (N4A), National Conference, St. Louis, Missouri, July 2003

“Athletic Representation and State Statues for Sport Agents,” 53rd Annual Florida Association for Health Physical Education Recreation and Dance (FAHPERD) Conference, Dayton Beach, Florida, October, 2002

“Athletic Budgets Based on Gender?” Mid-South Educational Research Association Meeting, Memphis, Tennessee, April 1997

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2007 COE John and Clara McDonald Endowed Scholarship, Florida State University
2007 Dissertation Research Grant, funded by the Congress of Graduate Students (COGS), Florida State University
2005 Women’s Sports Foundation Dorothy Harris Endowed Scholarship
1991 and 1992, NCAA All-American Team, Track and Field
1992 Most Valuable Runner, Florida State University Track and Field