

ABSTRACT

Title of Thesis: CAREER CERTAINTY OF STUDENT-ATHLETES IN
REVENUE AND NON-REVENUE SPORTS

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This thesis explored the career certainty of college student-athletes, specifically looking for differences between athletes in revenue and non-revenue sports. The My Vocational Situation survey was administered to a sample of Division I athletes representing both revenue and non-revenue sports to assess their vocational identity, as well as to gain information regarding possible difficulties and barriers against career certainty in student-athletes. Additionally, this thesis sought to find relationships between the following variables: (a) vocational identity and perceived barriers to career decision-making, (b) intent to pursue professional athletics and other non-athletic career aspirations, (c) vocational identity and career aspirations, and (d) sport type and intent to play professionally. Although no significant differences were observed between revenue and non-revenue athletes

with respect to career certainty, chi-square analyses revealed significant relationships between all four sets of variables above (a-d). Based on these findings, implications for practice and future research are discussed.

CAREER CERTAINTY OF COLLEGE STUDENT ATHLETES IN REVENUE
VS. NON-REVENUE SPORTS

By

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CHAPTER I: INTRODUCTION

One of the primary long-standing purposes of a college education is to prepare for and find a vocational path. Although many institutions of higher education have become increasingly progressive and sophisticated with the types of experiences they offer students, career development still remains a central focus of a college education. As economic conditions fluctuate, technology and information systems advance, and the nature of the work force continues to change in modern society, more and more individuals enter higher education with hopes of preparing themselves for the evolving world of work (Hartung & Niles, 2000). Whether a young adult first entering college, or a middle-aged single mother making a career change, today's college student seeks to advance him/herself and become more marketable by obtaining a college degree. Of course, before one can prepare for a particular vocation, he/she must identify and commit to one. With the emphasis Western culture places on personal choice, the notion of career decision is an important one for many students entering institutions of higher education. In turn, institutions are responsible for facilitating this choice for students by helping them learn about their own interests and skills and developing plans that are congruent with their career and personal needs. These efforts have become more intentional and specialized with the emergence of career development offices across college and university campuses (Sandeen, 1996). Career counselors work closely with students, faculty, corporations, and agencies to discover and present opportunities for students to explore (Sandeen, 1996).

As the college student profile becomes increasingly diverse and unpredictable, career centers across college campuses face the challenge of providing appropriate and effective services for all students. This is a formidable task, which requires awareness and sensitivity in working with diverse populations, as well as a keen understanding of the most current issues and needs they bring to college campuses. To inform these efforts toward better serving today's college students, student affairs scholars have spent recent years researching various student populations (Alvarez, 2001; Hernandez, 2000; McEwen, Roper, Bryant, & Langa, 1990; Pope, 2000). Many of these populations include groups who have historically been underserved in the United States, such as racial and ethnic minorities. Other works have highlighted the experiences of gay, lesbian, bisexual, and transgender students (Cass, 1979; Fassinger, 1998; Howard & Stevens, 2000; Wall & Evans, 2000), drawing attention to their salient issues and needs. Generally, these bodies of literature have suggested that the unique nature and experiences of such student populations make them significantly different from the traditional college student that has for years been the focus of theory, research, and practice in higher education.

The unique culture and life experiences of student-athletes differentiate them from the general college student population, leading some researchers (Sedlacek & Adams-Gaston, 1992; Sowa & Gressard, 1983) to conceptualize them as nontraditional students. Their dual role as students *and* athletes presents a formidable set of challenges for them to grapple with in the college setting. These challenges permeate many aspects of their lives, including academics, interpersonal

relationships, and planning for the future (Ferrante, Etzel, & Lantz, 1996). One important task associated with the latter challenge is career planning, which is the central focus of the present study.

The student athlete population in colleges and universities has also been investigated in higher educational research (Etzel, Ferrante & Pinkney, 1996), albeit for different reasons. Grandiose institutional investments in athletic programs, coupled with widely publicized scandals that have included cases of alcohol and drug abuse, violence, and gambling, have drawn much scrutiny and investigation from university officials (Chandler, Johnson, & Carroll, 1999 Hinkle, 1996). Conclusions drawn from research regarding these issues have traditionally stigmatized student-athletes and alienated athletics from the campus mainstream. Thus, athletic programs and personnel have become quite protective of student-athletes and, at times, weary in allowing access to them, even for more constructive research purposes. At the same time, colleges and universities continue to aggressively recruit hundreds of thousands of athletes from all over the country and the world, which makes them an eminent population worth studying in the context of higher education.

Intercollegiate Athletics: Changes and Trends

Many colleges and universities in the United States have a wide array of athletic programs to offer incoming students, attracting more than 400,000 men and women per year (Hembra, 1999). These programs include team and individual sports ranging from football to fencing, and offering athletes the opportunity to display their skills and talents on the field while representing their institutions in

intercollegiate competition. Competition among most four-year schools is regulated by the National Collegiate Athletic Association (NCAA), the largest athletic association in the United States. Schools competing under the administration of the NCAA are categorized into one of three divisions, generally depending upon the size of the institution's athletic programs and facilities. Those with the largest programs belong to Division I; and those with smaller programs are members of Divisions II or III. A significant portion of schools may also be organized under the National Association of Intercollegiate Athletics (NAIA), which is the second largest athletic association for four-year institutions, similar in systems and structures to the NCAA. Together the NCAA and the NAIA administer athletic programs at over 1500 four-year colleges and universities (Hembra, 1999).

The number of student-athletes entering higher education and participating in intercollegiate athletics has steadily risen over the past two decades (Hembra, 1999), representing nearly approximately eight percent of the entire college student population (Hembra, 1999). Women's sports, in particular, have seen a significant increase in participation from the 1980s, with an impressive 20% gain in participants by 1997 (Hembra, 1999). This rise is in part due to the overall increase in female students on college campuses, with approximately 500,000 more women entering higher education between the academic years of 1985-86 to 1996-97 (Hembra, 1999). Another reason for increased female participation in college athletics is the passage of Title IX of the Education Amendments. Three major issues of sex discrimination are addressed in Title IX compliance: (a) the opportunities available for men and women to participate in sports, (b) the amount

of athletics-based financial aid given, and (c) the worth of benefits given to male and female athletes by athletic departments (Suggs, 1999). Although the amendment was introduced in 1972, its impact was not experienced until years later. Proportionally, however, male student athletes still comprise a larger percentage of undergraduates than female student-athletes at four-year institutions (Hembra, 1999).

The number of athletic *teams* across colleges and universities has also risen in recent years, with women's teams experiencing the largest growth (Hembra, 1999). This again may be a direct result of Title IX. Moreover, institutions have been allowed to grant more athletic scholarships to student-athletes, which has undoubtedly contributed to the rise in the student-athlete population in higher education (Hembra, 1999).

These trends certainly suggest greater investments being made toward intercollegiate athletics, since athletic programs are often major contributors to institutional prestige and appeal. The University of Maryland, in the past two years, has exemplified this connection between athletic success and institutional prominence. With two consecutive successful basketball seasons resulting in impressive performances in the NCAA tournament, the University has experienced a dramatic increase in popularity and prestige. Some associate Maryland's overwhelming increase in applicants to the institution's recent athletic successes (University of Maryland—Office of Undergraduate Admissions, 2001). The recent success of its football team has also fueled the University's marketing efforts, as seen in its new "ZOOM" television commercials and the institution's home page.

Although such athletic success and popularity can be quite promising for the University and its officials, it presents the danger of becoming too narrowly focused on institutional advancement, thereby overlooking the challenges and needs of the individual student-athletes involved. The following section will address this issue by discussing common challenges encountered by student-athletes during the college years.

Challenges of Participation in Intercollegiate Athletics

The college years are a critical time of growth and change for most young adults. College students are faced with the challenges of establishing new relationships, making important career and life decisions, balancing academic and social priorities, and adjusting to a new lifestyle of freedom and independence (Chickering, 1969; Chickering & Reisser, 1993). In addition to experiencing all these challenges, student-athletes must also deal with the pressures of the physical, psychological, and time demands of participation in intercollegiate athletics (Kirk & Kirk, 1993). Each student-athlete brings to college a unique personal history and set of interests, skills, and abilities. This can often be overlooked by coaches and other personnel in attempting to develop and advance an athletic program. In many ways, student-athletes are expected to assimilate to the culture of the athletic program based on the goals and values determined by its creators. Upon joining an athletic program, students are presented with a complex set of expectations and demands that add to an already overwhelming list associated with college attendance in general. Depending on the particular sport and the competitive level of a school's athletic program, student-athletes frequently invest more than 30 hours per week in

structured and informal sport-related activities (Etzel, Ferrante, & Lantz, 1996). These activities include conditioning, team meetings, rehabilitation, practice, travel, and actual competition, which collectively contribute to tremendous amounts of physical and psychological stress on an individual.

Moreover, student-athletes, especially in football and men's basketball, are often regarded as performers, and are consistently placed in arenas where their efforts are readily praised and criticized. Men's basketball and football are typically singled out due to their capacity to generate revenue for their institution. Thus, these sports are usually considered to be *revenue-generating* sports (Martinelli, 2000).

The pressures associated with revenue-generating sports are often intensified by the media, where athletes are provided with "an artificial, yet influential measure of their worth" (Ferrante et al., 1996, p. 6). The outcome-oriented world in which we live exacerbates the situation. Regardless of how well a game is played or how successfully plays are executed, what will ultimately be remembered and spoken about is the win or the loss. This undoubtedly places tremendous pressure on student-athletes; and the presence of coaches, families, peers, fans, and media only augments the pressure.

It is important to keep in mind that the challenges and pressures associated with athletic participation vary according to the type of institution, athletic program, and the type of sport one plays. Generally, a revenue-generating sport, such as football at a competitive Division I university, will present a greater magnitude of the aforementioned challenges for its participants than a non-revenue generating sport, such as tennis at a small, private school with a limited Division III program.

Further support of this idea will be provided in the following chapter, which will highlight many of the significant studies regarding the impact of college athletics on student development. Comparing the nature of athletics at radically different schools (large Division I vs. small Division III), the differences in the challenges associated with athletic participation can more readily be seen. However, one may wonder to what degree these differences exist among athletic programs within a single institution, and how these differences might influence student development. The present study focuses on the construct of career certainty as a specific dimension of student development. The main purpose of the study is to determine if there is a difference in career certainty between student-athletes participating in revenue and non-revenue generating sports within the same institution. Additionally, the study aims to provide information on possible barriers to career certainty, as a way of accounting for any differences that may be observed between the compared groups.

Definition of Terms

Before approaching the research problem, it is useful to identify and define terms and ideas that are salient to the study. This will help to more clearly delineate what is being investigated and enable the investigator to create an appropriate research design for examining the research question.

Career Certainty

Career certainty refers to the degree to which individuals feel confident or decided about their vocational plans (Hartung, 1995). Career certainty differs from career maturity—another widely discussed construct—in that career maturity

reflects an individual's ability to cope with the developmental tasks associated with selecting a career (Super, 1957). Career planning, exploration, decision-making, and information gathering are various methods that enable an individual to handle such tasks throughout the different stages in one's life (Super, 1957). Whereas career maturity focuses on one's "behavioral repertoire" in relation to the pursuit of a career (Super, 1957, p. 57), career certainty assumes a cognitive and affective approach toward the career decision-making process. Career certainty is considered to be an aspect of personal and vocational identity, and can be discerned through one's feelings, thoughts, and attitudes (Osipow, 1983). Career certainty suggests awareness and confidence in one's interests, skills, knowledge, and competencies (Holland, 1966; Osipow, 1983).

Revenue vs. Non-Revenue-Generating Sports

The terms "revenue" and "non revenue" are commonly used with college sports in relation to their ability to generate income for the institution. In most cases, football and men's basketball have a greater following and a greater number of fans who attend competitions (Martinelli, 2000). Thus, they are the sports that traditionally produce revenue, often through ticket sales, merchandising, and endorsements. In many large and successful Division I athletic programs, these sports can serve as vehicles for student-athletes to ultimately compete on a professional level. Geographic location can sometimes influence whether or not a college sport generates revenue. For instance, ice hockey may be a revenue-generating sport in New Hampshire, but not even exist as an NCAA sport in Florida. However, in general, as well as specific to the institution where the study was

conducted, revenue-generating sports are considered to be men's basketball and football (Martinelli, 2000).

Non-revenue-generating sports—also referred to as the Olympic sports—comprise all other college sports governed by the NCAA that generally do not generate profit (Martinelli, 2000). Common sports in this classification include but are not limited to tennis, swimming, track and field, and soccer. Opportunities for advancement from college to the professional ranks are more limited in these sports.

Importance of the Study

As higher education officials become increasingly familiar with the rigors and challenges associated with participation in intercollegiate athletics, they must also consider how these challenges impact the college outcomes of student-athletes. A considerable amount of work has been published regarding the impact on student-athletes' cognitive and psychosocial development in college (Baker, 1997; Cornelius, 1995; McBride & Reed, 1998; Pascarella et al., 1999; Ryan, 1989; Simpson, 1999; Taylor, 1995). Many of these studies have compared student-athletes to their non-athlete counterparts, and have used the general student population as the norm in drawing conclusions about the student athlete population. With this type of research design, differences in various aspects of development have been observed between athletes and non-athletes. Although these differences will be elaborated in the following chapter, it should now be mentioned that many of these studies included both revenue and non-revenue athletes in one sample. Thus, all the conclusions drawn regarding the student-athlete population have been based upon the combination of data on both revenue and non-revenue athletes.

Investigations that have made the distinction between revenue and non-revenue athletes (Briggs, 1996; Pascarella et al., 1999, Simons, Van Rheenen, & Covington, 1999) have mainly addressed cognitive development and academic achievement. One study that has examined career development yielded no significant difference in career maturity with respect to type of sport—that is, revenue versus non-revenue (Smallman & Sowa, 1996). It is important to note, however, that the study did not include female student-athletes, and had a heavy concentration of first year students, both of which may have had confounding influences on the findings. First, the absence of women limits the generalizability of the findings, especially in non-revenue generating sports (given that revenue-generating sports traditionally consist of football and men's basketball). Second, the high concentration of first year students is likely to reflect lower levels of career maturity, assuming relatively normal development (Super, 1957). For younger college students (i.e., first year students), developmental tasks, such as establishing relationships, developing intellectual competence, and managing emotions hold greater salience than vocational planning and decision-making (Chickering, 1969; Chickering & Reisser, 1993). Thus, one would expect lower career maturity from them, which would undoubtedly impact the overall results of the Smallman and Sowa's (1996) study. Additionally, the instrument utilized by the researchers (Career Development Inventory) is long and cumbersome, requiring approximately 60 minutes to complete. This can potentially compromise the accuracy of the responses from the respondents, who, toward the latter stages of the survey, may have lost concentration and not have responded as thoughtfully and honestly.

The present investigation aims to compensate for the shortcomings in the above-mentioned study, as well as add to the scant body of knowledge regarding student-athletes and their career certainty. Through the recruitment of a more gender-balanced and career oriented (i.e., non-freshman) sample, as well as a more concise and manageable instrument, this study seeks to determine if there are differences in career certainty between revenue and non-revenue generating college athletes. Since revenue-generating sports typically serve only men, the gender balance can only be achieved in the non-revenue group. In addition to examining group differences, the study will provide information regarding possible barriers to career certainty. If differences do exist between the revenue and non-revenue groups, the information regarding barriers could help explain some of these differences.

Further support for the importance of the present study is provided by Ginzberg and his associates in their philosophy of vocational development (Ginzberg et al., 1951). The authors suggest that career development consists of a series of decisions and re-decisions that are of great cost to an individual and more or less irreversible (Ginzberg, et al., 1951). The following example illustrates this idea:

A young adult goes to college only once; if he [or she] decides to major in engineering, it means that...he [or she] cannot become a lawyer or a doctor. After he has devoted four or more years to specializing in one subject, it is expensive in terms of both dollars and emotions to turn his [or her] back on his [or her] prior decision and enter a new field. (p. 27)

Although this assertion was made over 50 years ago, it still holds true for many vocationally minded individuals, who view college as a vehicle for obtaining a good job. Students from low socioeconomic backgrounds are an example of such individuals (Stitt-Gohdes, 1997). Moreover, a large proportion of college student-athletes belong to economically disadvantaged groups (Sellers & Damas, 1996), which makes the dilemma of career choice a more urgent one for them.

The current study anticipates that student-athletes participating in revenue-generating sports (i.e., football and men's basketball) will report lower levels of career certainty than their counterparts in non-revenue generating sports. Should this be the case, the findings of this study would support already established differences between the two groups, particularly in the areas of critical thinking, reading comprehension, and academic achievement (Briggs, 1996; Pascarella et al., 1999; Young & Sowa, 1992). Since revenue-generating sports are generally more likely to lead athletes into professional ranks than non-revenue sports, revenue athletes may be too narrowly focused on "making it to the pros" and thus less able to see their roles beyond athletics than non-revenue athletes, whose competitive career typically ends upon graduating from college.

Since only approximately one percent of all student-athletes are actually able to continue professionally (Muczko & Thompson, 1994), the need for career planning outside of athletics is vital for many student-athletes. The findings of the current study can be valuable for athletic and university personnel in shaping their efforts toward providing more effective developmental strategies and interventions for student-athletes. If, for instance, differences are observed between the revenue

and non-revenue groups, resources, in turn, can be allocated in a more appropriate and equitable manner to these groups. Learning about barriers against career certainty will enable support units to create programs and services that specifically address them and help student-athletes gain greater preparation and clarity toward a vocational path.

CHAPTER II: REVIEW OF LITERATURE

This chapter begins with an overview of the significant theoretical works on the construct of career development. Each of these theories assumes a different approach in explaining the process of career development and discusses different determinants of one's career choice. More recently emerging theories that have built upon or been inspired by the earlier seminal works are also discussed. The chapter will then provide a summary of recent studies that have examined the student-athlete experience in the context of higher education from multiple dimensions. One of these dimensions includes career development and decision-making. Analyses of existing studies yield critical pieces of information that help explain the unique experiences and challenges student-athletes encounter and how these challenges impact their personal and career development in college. However, more research is necessary to provide further information on the experiences of these athletes.

Theoretical Foundations of Career Development

Several theories have been developed to aid counselors and other professionals in understanding the process of vocational development. These theories not only enable practitioners to conceptualize clients and their vocational concerns, they assist them in constructing strategies to effectively address these concerns. Osipow (1990) classified the various career-related theories into four categories: *developmental, personality-based, reinforcement-based, and differential*. These four approaches describe different ways in which individuals make career-related decisions and engage in career development behaviors.

The Developmental Approach

Developmental approaches, such as Super's (1957) Life Span Theory, suggest that career development is a fluid process that involves a lifelong series of decisions and continual adaptation and adjustment to those decisions (Hartung & Niles, 2000). Super delineated the life span into five stages, each of which represents specific developmental tasks and salient issues. An individual's progress in mastering the tasks through the stages describes vocational maturity. Therefore, studies that utilize vocational maturity as a construct often approach career development through the developmental lens. Super identified the above-mentioned life stages as *growth*, *exploration*, *establishment*, *maintenance*, and *disengagement* (Hartung & Niles, 2000; Super, 1957). The elements of these life stages include approximate chronological ages and typical developmental tasks individuals encounter in each stage.

Growth Stage

Occurring from ages four to fourteen, the development of self-concept is a key feature of this stage. Children learn about and develop their self-concept through interaction and identification with key family figures and other significant individuals. Earlier in this stage, curiosity and fantasy dominate as children spontaneously explore their world. Interest and capacity become more important later in the stage, when children's activities and aspirations are largely determined by their likes and dislikes. The end of the growth stage (ages 13-14) is characterized by the individual's orientations toward the future, as he/she begins to establish some direction in life and develops a sense of conviction and purpose in

school/work. At this point, abilities are given more weight, and job/career requirements are considered (Hartung & Niles, 2000; Super, 1957).

Exploration Stage

Lasting from the approximate ages of 15 and 24, this stage includes the tasks of self-examination, role tryouts, and occupational exploration that people work to resolve while engaging in school, work, and leisure activities. Early aspects of the exploration stage (ages 15-17) involve the consideration of one's needs, interests, capacities, values, and opportunities, as he/she develops a clearer self-concept and vocational identity. This usually informs an individual's tentative preference of an occupational field, and enables him/her to try out some of these preferences in a variety of areas including school, social interactions, and part time work. Ages 18-21 experience a transition from tentative vocational ideas to more weighted and realistic considerations, as young adults prepare to enter the labor market or professional training. An individual moves through and out of the exploration stage (ages 22-24) when he/she has identified a seemingly appropriate career field and has found a beginning job within that field (Hartung & Niles, 2000; Super, 1957). At least chronologically speaking, the participants recruited for the current study will fall in the exploration stage of career development.

Establishment Stage

Having found an appropriate field, individuals in this stage (ages 25-44) will try to affirm their place in it. The first task in early aspects of the establishment stage involves *stabilizing* in a job or position, through competent performance and successful adaptation to one's job responsibilities and work culture. As one begins

to feel comfortable and fulfilled in a job, he/she moves toward *consolidating* his/her position by (a) demonstrating responsible and productive work behaviors and attitudes, (b) maintaining positive and constructive interpersonal behaviors at work, and (c) adjusting to existing and changing demands of the work environment. Once a position is stabilized and consolidated, individuals who desire to move to higher-level positions will put forth effort to *advance* within their careers. These individuals will identify realistic goals and career paths, and develop strategies that will enable them to achieve these goals (Hartung & Niles, 2000; Super, 1957).

Maintenance Stage

Having established a level of accomplishment and stature in the world of work, the concern for adults in the maintenance stage (ages 45-65) is how to hold it. This stage is often characterized by a choice people need to make regarding whether or not to stay in their current positions until retirement or work toward a new one. Those who choose to switch positions often move into a new one by revisiting and recycling through earlier stages in this model (namely exploration and establishment). Those who decide to remain in their original positions typically break little ground, but continue along established lines and preserve their niche by adjusting to the changing nature of their work (Hartung & Niles, 2000; Super, 1957).

Disengagement Stage

Originally termed the *decline stage* by Super (1957), the disengagement stage denotes a time in one's career when adults in their sixties begin to decelerate in the amount they work and their level of productivity. As physical and mental

strength fade, individuals' work activities change, as they move from selectively participating in their field (such as giving up duties, working part time) to completely disengaging from the world of work. As this happens, adults are confronted with retirement planning tasks such as organizing finances, scheduling daily activities, and establishing a new lifestyle (Hartung & Niles, 2000; Super, 1957).

Super's (1957) Life-Stages Vocational Development Theory suggests that career development is a dynamic and cyclical process, in that individuals have the capacity to revisit and recycle through any of the stages he describes. This re-engagement in earlier stages can occur in individuals who make career shifts or switch to new positions within a given career. According to the theory, such changes are prompted by one's changes in self-concept, which is fluid and dynamic, and is constantly re-formulated during a lifetime. Therefore, self-concept is also considered a major construct in developmental approaches to career development (Osipow, 1990). Thus, in many ways, career-related choices ideally represent the implementation of one's self-concept in relation to work (Osipow, 1990).

Personality Based Approach

The aim of personality-based theories of career development is twofold: (a) to describe how the work personality, with its various attitudes, needs, values, abilities, and skills, develops; and (b) to describe the consequences of the work personality on one's vocational choice (Osipow, 1990). A major contribution to the personality-based approach is Roe's Theory of Personality Development and Career Choice (Roe, 1956). Roe proposed that genetic endowments combine with family

background and childhood experiences to shape individual need structures (as delineated in Maslow's hierarchy of needs), which in turn, influence the type of work one chooses to pursue (Roe & Lunneborg, 1990).

Roe's theory suggests that the development of all individual characteristics are limited by genetic inheritance. Moreover, characteristics such as intellect and temperament are typically more powerfully influenced by genetics than other variables such as interests and attitudes (Roe & Lunneborg, 1990). Second, the development of these inherited characteristics is affected not only by individual experiences, but also by one's family cultural background and socioeconomic position (Roe & Lunneborg, 1990).

Another point in Roe's Theory of Personality Development and Career Choice suggests that an individual's personality leads him/her to seek experiences that further reinforce it. Various work settings will provide reinforcement for different types of personalities. With this idea in mind, Roe created a classification system of hundreds of occupations based on the range and intensity of interpersonal relationships involved and the degree of responsibility, capacity, and skill involved in each occupation. How well a work setting is able to provide the personality reinforcement sought by individuals will often determine their stability and satisfaction at work (Osipow, 1990; Roe & Lunneborg, 1990).

Reinforcement-Based Approach

Career development theories falling in this group are based on the application of Bandura's (1977) social learning theory of behavior. The theory assumes that individual personalities and behavioral patterns arise primarily from

their unique learning experiences, while still acknowledging the influence of innate developmental or psychological processes (Mitchell & Krumboltz, 1990). These learning experiences inform individuals' observations and perceptions about themselves, which in turn, influence their career aspirations, attitudes, beliefs, choices, and satisfactions (Hartung & Niles, 2000). The social learning theory of decision-making by Mitchell and Krumboltz (1990) represents the reinforcement-based approach to career development. The authors delineate four categories of factors that influence people's career decision-making path.

Genetic Endowment and Special Abilities

Genetic endowments are qualities inherited at birth such as sex, race, and physical appearance. Intelligence, athletic ability, or musical/artistic talents are examples of special abilities, which often result from the interaction of genetic factors and exposure to selected environmental events (Mitchell & Krumboltz, 1990).

Environmental Conditions & Events

These factors are generally outside an individual's sphere of control and include social, cultural, political, economic, and natural forces. Examples of such factors in the context of vocational decision making are: number and types of available jobs, government-sponsored programs that assist individuals with financing college, labor laws and union rules, and types of training opportunities for vocational advancement (Mitchell & Krumboltz, 1990).

Learning Experiences

Learning experiences are further distinguished as *instrumental* or *associative*. Instrumental experiences involve situations where individuals act on the environment in such a way as to elicit certain consequences. Each experience consists of antecedents, behavioral responses, and consequences. *Antecedents* include genetic endowments, special abilities, environmental conditions, and other events mentioned above, as well as characteristics of a particular task or problem. *Behavioral responses* include cognitive and emotional responses as well as overt behaviors. Consequences of instrumental learning allude to immediate and delayed results produced by the behavior, including impact on others in the environment. Figure 1 illustrates how these antecedents, behaviors, and consequences interact in a hypothetical situation. The column labeled “antecedents” contains some of the pre-existing and relatively unchangeable conditions that Bob (the subject) is faced with. The “behaviors” column suggests one possible way in which Bob could respond to the given conditions (antecedents). Finally, the “consequences” column includes a set of possible outcomes resulting from Bob’s response to the situation.

Associative learning experiences consist of connections people perceive between stimuli and the environment (Mitchell & Krumboltz, 1990). In such situations, a neutral stimulus is paired with a positive or negative stimulus from the environment, which leads a person to associate the neutral situation with the positive/negative stimulus with which it was paired. The following example from Niles and Hartung (2000) provides an example of such pairing between neutral and positive stimuli in associative learning:

A college student, undecided about a major, attends a job fair to explore career options and has an extremely positive encounter (positive stimulus) with someone employed in an occupation that the student has never really considered before (neutral stimulus). As a result of this positive encounter, the student decides to explore the occupation of the person the student met at the job fair. (p. 25)

Thus, the positive interaction in the above example informs the student's stereotype regarding the occupation being represented at the job fair. Mitchell and Krumboltz (1990) suggest that such stereotypes, even resulting from only one instance, can last a lifetime and have significant effects on career decision-making.

Task Approach Skills

The fourth factor that influences an individual's career decision-making path is task approach skills. These include work habits, perceptual and cognitive processes (such as attention, problem-solving), mental sets, and emotional responses (Mitchell & Krumboltz, 1990). Task approach skills are brought to new tasks or problems and will influence the outcomes of these tasks or problems (Mitchell & Krumboltz, 1990). They can also serve as outcomes themselves. For instance, as a result of a terrible loss in an athletic competition, a player may decide to invest more time and energy in improving his/her skill. This, in turn, will lead to an *outcome*, which includes enhanced work ethic, increased confidence, and a higher level of performance. The four factors mentioned by Mitchell and Krumboltz (1990) combine to influence people's perceptions of themselves, their abilities, the world

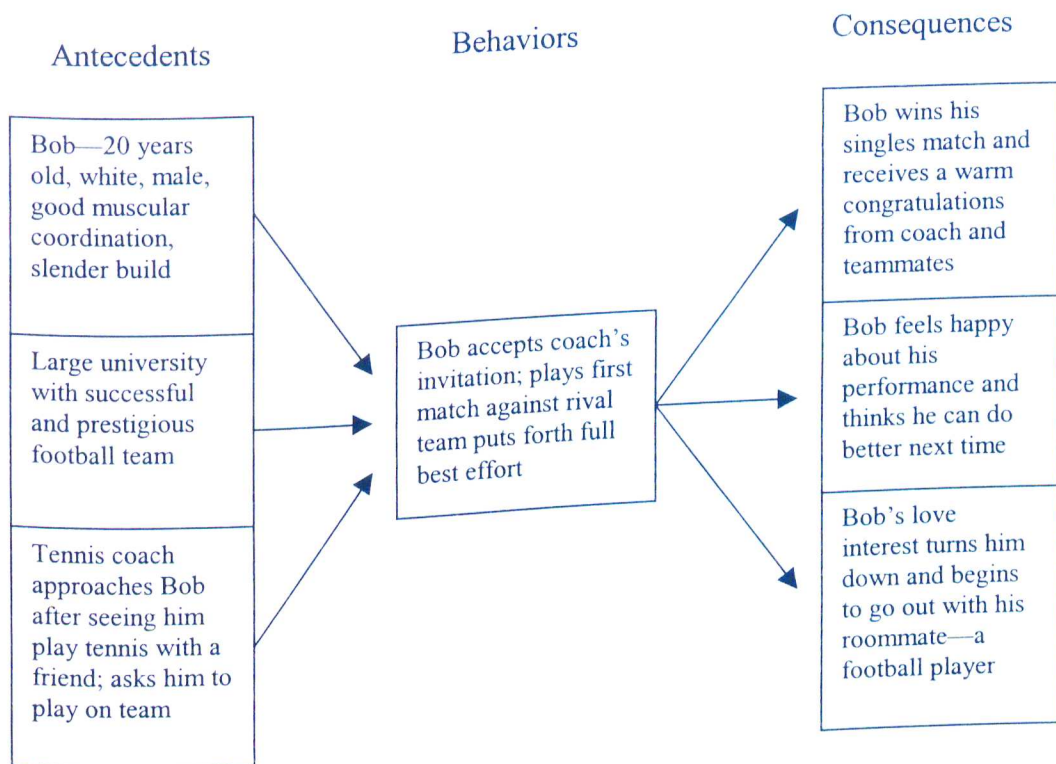


Figure1. Model of Instrumental Learning Experience. The figure illustrates the influence of antecedents on individual behavior and possible consequences of this behavior.

Note. Adapted from Mitchell & Krumboltz' (1990) Social Learning Approach to Career Decision Making.

around them, and their actions. People then utilize these perceptions to make decisions about and pursue a vocational path (Mitchell & Krumboltz, 1990; Niles & Hartung, 2000).

In a more recent theoretical approach, Lent, Brown, and Hackett (1996) share many of the ideas of Mitchell and Krumboltz' (1990) theory, particularly in their discussion of the interrelationship between personal attributes, environmental factors, and individual behaviors. Their Social-Cognitive Career Theory also draws heavily from the work of Bandura (1977), in emphasizing the importance of learning experiences on individual development. However, it places greater attention on the specific cognitive mediators through which these learning experiences guide career behavior (Niles & Hartung, 2000). Inherent in the Social Cognitive Career Theory is the emphasis on personal agency, which underscores the crucial role of the individual in his/her vocational development (Niles & Hartung, 2000).

The Differential Approach

This approach posits that career-related decisions are made based on individual values, interests, aptitudes, and skills (Hartung & Niles, 2000). The goal is to find educational or occupational factors that match these individual traits. Exploration and information seeking about various areas of interest are examples of career-related behaviors that can help students accomplish this matching between personal traits and educational/vocational factors (Hartung & Niles, 2000). John Holland's theory of vocational personalities and work environments (1973) reflects the differential approach to career development. Holland's theory considers

information about people and occupations, and suggests that individuals' vocational behaviors and decision-making are influenced from the interaction between themselves and their environments (Holland, 1973). When strong congruence exists between one's personal traits and his/her work environment, we can expect greater levels of persistence, satisfaction, and productivity at work (Osipow, 1990).

Through his work as a vocational counselor and a clinician, Holland formulated six different "types," which individuals fall into, based on their interests, likes, and dislikes (Holland, 1966). These six categories are: Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. Inherent in these categories is the assumption that there is a "type" for every individual. The following section will provide a brief overview of the distinguishing characteristics of each category.

The Realistic Type

Individuals falling into this category prefer experiences and occupations that allow them to work with objects, tools, machines, and animals. They value practicality, common sense, concrete things, and tangible personal characteristics, such as money, power, and status. Realistic types also enjoy the outdoors and physical activity (Hartung & Niles, 2000; Holland, 1973). According to some counselors, athletes tend to exhibit high levels of Realistic attributes (J. Adams-Gaston, personal communication, February 6, 2002).

The Investigative Type

Investigative types are usually analytical, curious, intellectual, and introspective individuals who utilize their problem solving and other cognitive competencies at work and other settings. They prefer to work alone, with numbers

and ideas, rather than people of things. They tend to work in scientific fields, and value accuracy, precision, methodology, and scholarship (Hartung & Niles, 2000; Holland, 1973).

The Artistic Type

Artistic types perceive themselves as expressive, original, intuitive, and non-conforming, and pursue endeavors that allow them the liberty to be creative and innovative. They value aesthetics, imagination, and independence, and avoid clearly defined and highly structured environments. Instead, they prefer situations that are ambiguous, unstructured, and flexible (Holland, 1973; Hartung & Niles, 2000).

The Social Type

Social types are friendly, persuasive, and cooperative individuals, who prefer activities that involve interactions, communication, and helping others. People of this type value generosity, service, and interpersonal relations, and are perceived as kind, patient, helpful, sociable, and understanding. Social types enjoy working with people, while shying away from activities that involve tools, machinery, and technical devices (Hartung & Niles, 2000; Holland, 1973).

The Enterprising Type

People in this category regard themselves as aggressive, popular, and self-confident. They tend to be business-oriented individuals, and find themselves in positions of leadership, where they work to attain organizational, personal, and economic gains. Enterprising types value risk taking, status, and competition, and avoid activities that involve scientific and investigative competency. Similar to the

Social types, Enterprising individuals prefer to work with people, as long as they can persuade them to meet their own or an organization's needs (Hartung & Niles, 2000; Holland, 1973).

The Conventional Type

Individuals in the Conventional group can be described as conforming, prudish, conscientious, and obedient people, who tend to maintain the status quo and follow tradition. Conventional people value stability, accuracy, and efficiency, and prefer well-defined, routine, and methodical activities. Fitting activities for this group include record keeping, manipulating data, and general clerical tasks (Hartung & Niles, 2000; Holland, 1973).

Along with Holland's first assumption (that individuals can be categorized into one of the above "types"), there exists a second assumption—that environments, too, can be classified into one of these six categories (Hartung & Niles, 2000). Thus, individuals of a certain type will likely enjoy and be optimally productive in environments that resemble their type.

As mentioned earlier, Holland proposes that people seek environments that are congruent with their personal traits, which encompass skills, values, interests, and aptitudes. This notion implies and focuses on the element of choice in pursuing one's vocational path. Whereas other theories do more to address the *process* of career decision making (Lent, Brown, & Hackett, 1996; Mitchell & Krumboltz, 1990; Roe & Lunneborg, 1990; Super, 1957), Holland (1973) places the importance on career choice in being able to predict one's persistence toward and satisfaction with a particular vocation. This philosophy is also shared by the present study,

which focuses on the *certainty* of career choice. Since most people are confronted with the responsibility of choosing a vocation, they want to be as confident and comfortable about their choice as possible. The present study seeks to examine the relative level of certainty among student-athletes, according to the type of sport (revenue vs. non-revenue) in which they participate.

Research on the Impact of Intercollegiate Athletic Participation on Student Development

How the unique experience of participating in college sports affects student development has been a topic of investigation in recent years. This section will review previous research on the topic, distill critical findings from the research, and illustrate the gaps in the existing body of knowledge—some of which the current study will attempt to fill.

Academic Achievement and Cognitive Development

Research regarding the relationship between intercollegiate athletic participation and academic achievement has traditionally considered grade point average (GPA) as an indicator of academic achievement, and has yielded mixed results. For athletes competing at elite Division I athletic programs, academic performance has been inferior to non-athletes (Hood, Craig, & Ferguson, 1992; Waters, 1992; Young & Sowa, 1992). In smaller, less intense athletic environments (i.e., Division II and III institutions), athletes have been reported to have equal or greater academic achievement than the general student population (Beal, 1999; Richards & Aries, 1999). The concern with such studies centers around the reliability of grades, which may be threatened by confounding influences, such as

the academic caliber of an institution, the student's course of study, professorial grading patterns, and teaching style (Pascarella & Terenzini, 1991). To compensate for this, Astin (1993) employed a standardized measure to assess the effects of sports participation on the intellectual achievement of college athletes. He studied a national sample of varsity athletes on the relationship of athletic participation to standardized graduate admission tests (e.g., Graduate Record Examination, Law School Aptitude Test, and National Teachers' Examination). Results indicated a negative correlation between athletic participation and test scores. Another study by Pascarella, Bohr, Nora, and Terenzini (1995), controlling for such confounding influences as pre-college test scores, ethnicity, academic motivation, and institutional type, showed male athletes in revenue sports (football and basketball) to have significantly lower year-end scores on standardized measures of reading comprehension and mathematics than their non-athlete counterparts or those in non-revenue-generating sports. Similar trends were seen with female athletes, although the extent of the impact was not as severe.

Using critical thinking as an indicator of cognitive development, McBride and Reed (1998) analyzed the performance of student athletes and non-athletes on critical thinking and reasoning tasks. Results indicated that athletes scored significantly lower on both tests than did non-athletes. The authors suggest that athletes, through rigid adherence to predetermined goals, experience an environment which neither encourages nor expects critical thinking.

Most recently, Pascarella et al. (1999) provided further evidence on the cognitive impacts of intercollegiate athletic participation in the areas of writing,

reasoning, critical thinking, and reading comprehension. Again, controlling for pre-college aptitude and other influences, a negative relationship was discovered between athletic participation and cognitive measures. Building upon a prior work of Pascarella et al. in 1995 (which only analyzed the effects of intercollegiate athletics on end-of-first-year reading comprehension and mathematical skills), the current study examined such effects on end-of-second and third year achievement. The study suggests that the pattern of effects observed in the 1995 study extend into the second and third year of college for athletes in revenue-generating sports. However, this does not seem to be the case for athletes in non-revenue generating sports, implying that “male intercollegiate athletes in non-revenue-producing sports derive as much cognitively out of college as do male non-athletes” (Pascarella et al., 1999, p. 20). Furthermore, there was little evidence that women are cognitively penalized by participating in intercollegiate athletics, which conflicts with the 1995 study (Pascarella et al., 1999). Since extensive measures were taken to negate individual differences, the authors attribute these cognitive deficiencies to the sports themselves (specifically football and basketball). They suggest that the physical and psychological requirements in revenue-producing sports leave insufficient amounts of energy to invest in cognitive and intellectual development (Pascarella et al., 1999). Time is another factor athletes contend with, as they struggle to devote time away from athletics to their course of study and academic growth. Based on the assessment of the works by Sperber (1990) and Telander (1996), Pascarella and his colleagues (1999) concluded that the culture of intercollegiate athletics may not value academic and intellectual achievement.

Non-Cognitive College Outcomes

The relationship between sports participation and non-cognitive variables in college athletes appear much more promising. In a study investigating the effects of athletic participation on the overall collegiate experience of student-athletes, Richards and Aries (1999) examined the costs and benefits associated with athletic participation in five areas: (a) the time demanded by athletic programs, (b) difficulties posed by membership on athletic teams, (c) effects on academic success, (d) effects on campus involvement, and (e) the effects of well-being and growth. With the exception of the third area (academic success), the remainder of the variables investigated are non-cognitive.

In regards to the first variable, time demands, although athletes on average spent considerably more time in extracurricular endeavors (athletics included) than non-athletes, they did not differ in the number of hours they spent per week toward academics (including classroom and study time). Athletes were also more likely to be invited to social events than non-athletes, but experienced greater difficulty in joining other extracurricular groups and being taken seriously in the classroom by professors. Despite the athletes' own perception that participation in sports created more difficulties for other campus involvement, assessment of their actual behavior yielded no significant differences between the athletes and non-athletes with respect to engaging in a variety of activities and interacting with diverse populations. In addition to their time commitment to athletics, student-athletes made time to join special interest groups, cultural clubs, community service organizations, and other worthwhile affiliations. Finally, a comparison of athletes and non-athletes revealed

no significant differences between the groups in their satisfaction with friendships, academic performance, physical health, ability to handle stress, identity development, and personal growth (Richards & Aries, 1999). The authors summarized that athletic participation “did not impede academic success, or prevent involvement in most other extracurricular activities or with non-athletes” (p. 211). It is important to note that this study consisted of a sample of student-athletes in a Division III athletic program, which does not attract the caliber of athletes as larger, more competitive schools (i.e., Division I schools). The positive outcomes reported in the study are more likely to be associated with student athletes at small liberal arts colleges, which is the case with this study.

Another study with a more comprehensive (a 20-year nationally representative sample from the Cooperative Institutional Research Program) sample of student athletes sought to examine the affective outcomes of intercollegiate athletic participation (Ryan, 1989). The four areas included in affective outcomes were (a) satisfaction with college, (b) motivation to complete bachelor’s degree (c) interpersonal skills, and (d) leadership ability. Ryan (1989) discovered that athletic involvement is positively associated with all four of these areas. These results are not surprising given Astin’s (1984) findings that athletic participation is often linked to satisfaction with professorial interactions, student friendships, and institutional reputation. Ryan (1989) further posited that because athletes typically spend more time at school than their peers, they exhibit personal identities linked more strongly to the school and have more direct interaction with support services and

administrators, thus resulting in a greater sense of satisfaction with the overall college experience.

Career Development

Although many student-athletes have initial hopes for professional careers in athletics upon entering college, only a small percentage actually realizes this hope (Martinelli, 2000). This reflects a need for career development and life planning beyond their athletic careers in college. Student-athletes' decisions are often postponed due to the intense level of commitment required by participation in sports (Hinkle, 1994). Termination from sports and the possibility of career threatening injuries also highlight the importance of career development and behoove student-athletes to plan for alternative vocational paths. Many studies have been conducted to examine how well student-athletes respond to this need for career planning, as well as how their shared athletic experience influences their career development process.

In an effort to find a relationship between intercollegiate athletic participation and college student development, Sowa and Gressard (1983) surveyed 48 student-athletes and 43 non-athletes, using the Student Development Task and Lifestyle Inventory (Winston, Miller, & Prince, 1990). The instrument measures achievement of certain tasks associated with various developmental areas, including educational and career planning. The researchers reported student-athletes as having significantly lower levels of achievement in both of these areas (Sowa & Gressard, 1983). However, the small sample size and lack of control for participants' age and year in school limit the generalizability of these results.

Studies examining the construct of career maturity in student-athletes have produced inconclusive results. Whereas Murphy, Petitpas, and Brewer (1996) reported an inverse relationship between athletic identity and career maturity among a sample of 124 intercollegiate athletes, Brown and Hartley (1998) found no significant relationship between these two variables in the 114 student-athlete sample investigated. To review, career maturity denotes one's readiness to engage in career-related behaviors (e.g., planning, information gathering, exploring options, narrowing options, decision-making). The inconsistent findings suggest a need for further investigation on the relationship between athletic participation and career maturity.

Brown, Glastetter-Fender, & Shelton (2000) explored relations among career decision-making self-efficacy, career locus of control, identity foreclosure, and athletic identity for 189 college student-athletes. The participants were also surveyed regarding the amount of time spent weekly in their respective sports and their expectations for professional sport careers. The researchers discovered hours of sport participation, identity foreclosure, and career locus of control to be inversely related to career decision-making self-efficacy (Brown, et al., 2000)

It may be noticed that nearly all of the existing career research on student-athletes classify athletes into one large group and draw conclusions regarding this population without any distinction between the type of sport they participate in (i.e., revenue vs. non-revenue generating). It is both empirically and intuitively apparent that the experiences between student-athletes in revenue and non-revenue sports is often different, particularly with respect to time demands, visibility, and pressure to

succeed in the competitive arena (Ferrante, Etzel, & Lantz, 1995; Martinelli, 2000; Sellers & Damas, 1995). Ironically, comparative literature between these groups is scant.

One study conducted by Smallman and Sowa (1996) made such a comparison between revenue and non-revenue athletes with respect to career maturity. The investigators administered the Career Development Inventory to 49 revenue and 76 non-revenue athletes, and revealed no significant differences in career maturity between the two subgroups. A major limitation in this study is its sample, which contained exclusively male student-athletes. The absence of women in the sample limits the generalizability of the findings to the greater student-athlete population, considering the already reported gender differences with regard to career development (Hartung, 1997; Naidoo, 1998; Stitt-Gohdes, 1997). The researchers also included a heavy freshman population in this study. Since career planning and decision are not typically emphasized during the first year of college, a freshman's career maturity would be expected to be lower than his/her older peers. Therefore, the heavy concentration of first year students in the present sample could potentially skew the results of the study. Another potential problem with Smallman and Sowa's study (1996) is the instrument used. The Career Development Inventory is a long and tedious instrument to complete, and can potentially impede the accuracy of data, as respondents lose concentration and respond haphazardly to items. The reliabilities of some of its subscales have also been questioned (Hackett & Watkins, 1995).

Summary of Literature Review

The review of the pertinent literature on the impact of intercollegiate athletic participation on college student-athletes suggests that student-athletes lag behind their non-athlete counterparts in various areas including academic achievement, cognitive development, and career maturity. Additional studies on possible differences in career maturity among revenue and non-revenue student athletes yield inconclusive results. Recognizing the scarcity and considerable limitations of previous career research comparing revenue and non-revenue athletes, the present investigation seeks to enhance the body of existing knowledge in this area. Through the recruitment of a more representative student-athlete population and the use of a more reliable instrument, this study sought to determine if a difference exists in career certainty between revenue and non-revenue generating athletes.

CHAPTER III: METHODOLOGY

The main purpose of this study was to determine if differences exist in career certainty between revenue and non-revenue generating intercollegiate athletes. It was hypothesized that revenue generating athletes will display lower levels of career certainty than their counterparts in the non-revenue generating sports due to the increased demands and pressures associated with participating in revenue-generating sports. These challenges dominate the lives of many revenue-generating athletes, thereby leaving little time and energy to focus on career issues.

The term career certainty refers to the degree to which individuals feel confident or decided about their vocational plans (Hartung, 1995). Hartung and Niles (2000) suggest that an individual's level of career certainty is influenced by his/her vocational identity—that is, the degree of knowledge and awareness of one's goals, interests, abilities, and talents related to making occupational choices. Thus, for college students, a strong sense of vocational identity contributes to a high level of certainty with respect to career decision-making (Hartung & Niles, 2000).

Research Design

This study utilizes a quantitative approach to examine the research questions at hand. Since participants were not randomly assigned to treatment conditions, the study takes on a quasi-experimental design (Jaeger, 1993). Given the prescribed criteria of the participants (i.e., intercollegiate athletes, non-first year students) and their general lack of accessibility, random sampling would not yield a viable sample size. Furthermore, their membership in a particular athletic team did not allow for random assignment to a treatment group (i.e., revenue vs. non-revenue). Thus, a

convenience sampling method was a more effective way to gather participants. This method yielded a high response rate from the population being studied.

The design of the study also contains a correlational component. Various portions of the study utilize a correlational approach to determine whether or not differences exist between two variables (e.g. career certainty and perceived barriers). These should correlations do not, however, imply causal relationships (Jaeger, 1993). In other words, the correlations do not indicate whether variable “a” causes variable “b,” or vice versa. They merely suggest some patten between the variables.

Sample

The sample for the current study consisted of 175 college students participating in intercollegiate athletics at a large, public, Division I institution in the Atlantic Coast Conference (ACC). Sixty-two of the participants were involved in revenue generating sports (men’s basketball and football), and the remaining 112 represented the non-revenue, or Olympic sports (track, lacrosse, gymnastics, soccer, tennis, field hockey, volleyball, wrestling, golf, swimming). The non-revenue group also consisted of a strong representation of female athletes. Participants were attendees of team meetings held by the Academic Support Unit (ASU) within the Department of Intercollegiate Athletics at the University where the study was conducted. They consisted of all athletes in the aforementioned sports in sophomore or greater standing at the university. The rationale for excluding first year students was that, in general, they are not developmentally in a stage where they are confronted with making significant career-related decisions (Chickering & Reisser,

1993; Knepfelkamp & Slepitz, 1976). Although attendees of the ASU meetings did include first year student-athletes, and data were collected from them, they were not utilized in the study.

Instrumentation

The study utilized an existing survey instrument, called the “My Vocational Situation,” as well as an additional set of questions hand-crafted by the investigator to obtain specific information regarding the athletes’ status at their institution (year in school, type of sport, etc.). The following two subsections will more thoroughly describe each of these instruments.

My Vocational Situation

The primary instrument used in the study is a survey developed by Holland, Daiger, and Power (1980) called “My Vocational Situation” (MVS). It is designed to help determine an individual’s level of career certainty, as well as to provide information about specific types of vocational assistance he/she may need. The MVS begins with a brief section asking respondents to indicate all occupations they are currently considering. This section is followed by an 18-item Vocational Identity (VI) subscale, which includes statements regarding the clarity and stability of one’s career-related attributes (Hackett & Watkins, 1995). Respondents are asked to respond in a “True” or “False” format, indicating agreement or disagreement with each statement. Below are examples of items found in the Vocational Identity scale:

- *I am uncertain about the occupations I could perform well.*
- *I don’t know what my major strengths and weaknesses are.*
- *I am uncertain about which occupations I would enjoy.*
- *I am not sure of myself in many areas of my life.*

- *I would like to increase the number of occupations I could consider.*
- *I don't know enough about what workers do in various occupations.*
- *I am confused about the whole problem of deciding on a career.*

A "True" response to each item in the Vocational Identity scale was coded as "0," while a "False" response was denoted by "1" for data entry. Thus, higher subscale scores (i.e., scores closer to 1) indicate greater certainty in regards to one's goals, interests, personality, and talents (Vocational Identity).

The remaining portion of the MVS consists of a four-item Occupational Information (OI) scale, and a four-item Barriers (B) scale. The Occupational Information scale contains types of information that respondents may need to assist in identifying career options (Hackett & Watkins, 1995). It includes the following items to which participants respond in a "Yes" or "No" format:

I need the following information regarding:

- *How to find a job in my chosen career.*
- *What kinds of people enter different occupations.*
- *More information about employment opportunities.*
- *How to get the necessary training in my chosen career.*

The Barriers Scale includes possible difficulties individuals may have in choosing a career (Hackett & Watkins, 1995). The following is a list of items found in the Barriers scale, to which participants also respond in a "Yes" or "No" format:

I have the following difficulties:

- *I am uncertain about my ability to finish the necessary education or training.*
- *I don't have the money to follow the career I want most.*
- *I lack the special talents to follow my first choice.*

- *An influential person in my life does not approve of my vocational choice.*

“Yes” responses for the latter two subscales (OI and B) were coded as “0;” “No” responses were represented by “1.” Lower OI scores indicate a greater need for occupational information, while lower B scores suggest greater obstacles perceived against achieving career goals (Hackett & Watkins, 1995).

The items in the Vocational Information and Barriers subscales allude to common difficulties individuals experience in making career-related decisions. As suggested by Gati, Krausz, and Osipow (1996), barriers to career decision making may include (a) lack of readiness, (b) lack of information, and (c) inconsistent information. Lack of readiness typically occurs *prior* to the decision making process and could result from lack of motivation, indecisiveness, and/or irrational expectations of the process of decision-making (Gati, Krausz, & Osipow, 1996). Lack of information and inconsistent information are usually barriers *during* the process, and usually relate to insufficient or conflicted knowledge about one’s self, occupations, and ways of obtaining career-related information (Gati, Krausz, & Osipow, 1996). Depending on where they are along the career decision-making process, some or all of these principles could be legitimate barriers for the athletes surveyed in this study.

“My Vocational Situation” has consistently demonstrated satisfactory levels of reliability. Estimates of internal consistency on the Vocational Identity scale of the MVS have been reported by the authors to range between .86 and .89 (Holland, Gottfredson, & Power, 1980). Other studies (Mauer & Gysbers, 1990; Nicholas &

Pretorius, 1994; Perry, Carera, & Vogt, 1999) have reported slightly lower scores ranging from .78 to .85. A test-retest reliability of .64 has also been obtained (Lucas, Gysbers, Buescher, & Heppner, 1988). Lucas et al. (1988) provided additional evidence of construct validity for the Vocational Identity scale of the MVS when they found that undeclared university freshmen, adults seeking career counseling, and displaced homemakers who were undecided all had lower VI scores than the populations of these participants in general. An additional correlation between MVS and age was reported by Holland et al. (1980). That is, older individuals reported higher levels of vocational identity and fewer barriers against career decision-making. Evidence that the instrument is normed across gender and race also exists. The reliability in these cases has ranged from .78 to .80 (Mauer & Gysbers, 1990; Nicholas & Pretorius, 1994).

The MVS has been verified to be an effective tool for measuring vocational identity by assessing the respondent's awareness of his/her talents and attributes (Hartung & Niles, 2000). The instrument is particularly valuable with the student-athlete population because it is brief and quite straightforward. Student-athletes, in the midst of their busy daily schedules, need no more than 15 minutes to complete the survey and are less likely to be confused or fatigued by it than other more complicated and cumbersome inventories might allow. The limitation associated with such a simple instrument is that it may not capture the depth of information of other more sophisticated instruments. For example, respondents to the MVS are asked to indicate whether the items in the Vocational Identity section are true or false as they relate to them. Such a dichotomous choice does not leave room for

respondents to indicate to what extent the statements are true or false. For the item “I don’t know what my major strengths and weaknesses are,” one student-athlete may have only a slight sense of what his/her strengths and weaknesses are and thereby indicate “False” for the item. Another student-athlete may have a much stronger sense about his/her attributes and also indicate “False.” To compensate for this, however, the directions instruct respondents to circle the answer that *best* represents their attitude/feeling toward the item. Thus, for the above example, the first student athlete who is more unsure than sure about his/her strengths and weaknesses would be instructed to answer with a “False” response to the item.

Overall, the MVS is an effective tool in determining one’s career certainty. Its brevity and simplicity coupled with its strong reliability and validity make it an ideal instrument in working with the student-athlete population.

Supplemental Information Section

MVS was accompanied by a short series of questions to gather pertinent demographic information and to learn more about the participants’ athletic status. The additional questions were attached to the MVS and included the following items:

- | | |
|--|-------------|
| (a) Are you on athletic scholarship? | Y or N |
| (b) Do you plan on playing professionally in your sport? | Y or N |
| (c) What sport do you play? _____ | M or F |
| (d) Please circle your gender. | Fr So Jr Sr |
| (e) Please circle your year in school. | |

Procedure

Participants for the study were accessed through athletic team meetings held with the student-athletes by the Academic Support Unit within the Department of Intercollegiate Athletics at the university where the study was conducted. These mandatory meetings take place periodically throughout each academic semester, during which athletes check in with academic advisors and receive information regarding class registration, major requirements, and academic eligibility. Through the cooperation of the Academic Support Unit (ASU), the MVS was administered to all student-athletes attending these meetings; however, only the responses from non-first year students were included in the study. The investigator of this study served as the primary administrator of the inventory, except for a rare circumstance in which he was not permitted to attend one of the team meetings by the head coach. In this situation, the ASU staff member working with this team administered the survey to the athletes at study tables over the course of several weeks. A total of 250 surveys were administered at the team meetings. Of these 250 surveys, 51 of them were taken by first-year student-athletes, and an additional 24 were returned incomplete. These surveys were excluded from the study, yielding a final sample of 175 student-athletes.

Data Analysis

Upon the completion of the survey administration, data were entered in an SPSS file for analysis. All "True" responses were assigned a code of "0," while all "False" responses received a code of "1." Similarly, all "Yes" responses were coded as "0," and all "No" responses as "1." With respect to the sport the

respondent plays, the responses were classified into two categories: non-revenue (denoted as “2”), and revenue (denoted as “1”).

For the gender item, males were coded as “1,” while females were denoted as “2.” Responses for class standing were recorded as follows: sophomore=2, junior=3, senior=4. For the item that asked respondents to indicate any careers they were currently considering, they were assigned a value of “2” if they listed careers/occupations other than the sport they play, and a value of “1” if they did not.

An additional category was created on the SPSS file that combined the “gender” and “type of sport” categories. That is, men who were in revenue sports were coded differently than men in non-revenue sports, who were, in turn, coded differently from women in non-revenue sports. To illustrate, the value of “1” that males received in the gender category was added to the value they received in the “type of sport” category (1 for revenue, 2 for non-revenue), yielding a score for the gender*sport type category. Thus, if a male was a revenue athlete, he would receive a value of “2” in the gender*sport type category. If, on the other hand, a male was a non-revenue athlete, he would receive a “3” (1 for gender + 2 for non-revenue) for the category. Since women were only in non-revenue sports, they all received a value of “4” (2 for female + 2 for non-revenue).

The above procedure enabled the investigator to perform a multivariate analysis of variance (MANOVA) among the three groups to look for overall differences in their Vocational Identity (VI), Occupational Information (OI), and occupational Barriers (B). This was done to obtain the result of the primary research question: “Is there a difference career certainty between college athletes in revenue

and non-revenue sports?" Although it is hypothesized that differences between the two types of athletes will be observed, the MANOVA statistic will help make the actual determination.

The MANOVA procedure is readily utilized in research designs that consist of multiple dependent variables and two or more independent variables whose means are being compared (Jaeger, 1993). The dependent variables in this case were Vocational Identity, Occupational Information, and Barriers, while the independent variables were the three groups of student-athletes: revenue males, non-revenue males, and non-revenue females.

Similar statistical procedures were employed with the data from the Occupational Information and Barriers scales to determine group differences. Consistent with the original hypothesis, revenue-generating student-athletes were expected to report more barriers than their non-revenue counterparts. The data in the Occupational Information and Barriers scales were also presented in the form of percentages (see Chapter IV), which will help summarize the responses from the entire student-athlete sample regarding possible difficulties with career decision-making (Jaeger, 1993). A correlation analysis was also performed to determine whether or not a relationship existed among career certainty and identified barriers. One would expect lower levels of career certainty to be associated with more barriers reported by respondents. While the analysis of data in the VI scale will address the primary question in the study, results from the OI and B scales will provide information regarding the second part of the research question.

Ancillary analyses utilizing a chi-square statistic were conducted to examine possible relationships between the following variables: (a) career certainty and intent to play professionally, (b) vocational identity and consideration of other careers beyond athletics, and (c) intent to pursue professional athletics and alternative career aspirations. Since they were examined in an exploratory fashion, hypotheses toward these questions were not formulated. It should be noted that for item “b” above, vocational identity was converted from a continuous variable to a categorical variable in order to be appropriately used with a chi-square statistic. This was done by breaking down the range of VI scores into quartiles, with each quartile representing a category of vocational identity (i.e. low, low/mid, mid/high, and high). This provides an additional method of considering vocational identity, through labeling, rather than through mere numerical values. Analyses of the results of this and other queries are reported in the following chapter.

CHAPTER IV: RESULTS

The primary purpose of this study was to determine whether or not college athletes in revenue generating sports differ in their career certainty from athletes in non-revenue generating sports. It was hypothesized that athletes participating in revenue sports (i.e. men's basketball and football) would exhibit lower levels of career certainty than their non-revenue counterparts, due to the added demands associated with participation in revenue generating sports. Some of these unique demands include (a) significantly more structured schedules dominated by their sport, (b) nation-wide travel and absence from classes, (c) handling the pressures imposed by the media and fans, and (d) handling the "celebrity" status that comes with being a part of an elite athletic program (Etzel et al., 1996).

The study explored the concept of career certainty by examining the athletes' vocational identity, as measured by the "My Vocational Situation" survey. Vocational identity refers to the clarity and stability of an individual's career-related attributes (Hackett & Watkins, 1995). This research also sought to assess possible differences in career certainty between male and female college athletes. To explore possible difficulties athletes might have with making career-related decisions, the study looked to find possible correlations between career certainty and perceived barriers to making career-related decisions. It was also speculated that athletes with lower levels of career certainty would also report more barriers to career decision-making.

This chapter presents the results of the statistical analyses delineated in the previous chapter in order to ascertain the responses to the research questions. The

(19%). Of the entire sample, 138 (79%) of the athletes were on athletic scholarship at the university, and 73 (42%) reported plans to play professionally in their respective sport. Results of these demographic characteristics are summarized in Table 4.1. Respondents were also asked to indicate all the occupations/careers they were considering. Eighty-six percent of the athletes expressed interest in careers beyond their sport, ranging from teaching, to law, to secret service agent. For a complete list of all careers mentioned, refer to Appendix E.

Results of the Primary Research Question

The primary research question asked whether or not there is a difference in career certainty between college athletes in revenue vs. non-revenue sports. It was speculated that significant differences would exist between the two groups of athletes, with the revenue group exhibiting lower levels of career certainty due to the added demands (time, celebrity status, competitive intensity, etc.) of participating in such sports. However, results of the respective multivariate analysis of variance (MANOVA) for the primary research question (See Table 4.2) were not significant. There were no overall differences in career certainty among the different types of athletes (male revenue, male non-revenue, and female non-revenue) $F(6, 340) = .466, p = .833$. The Wilks' Lambda for the type of athlete was .984. Based on these findings, the original hypothesis for the primary research questions was not confirmed. Although not significant, males in non-revenue generating sports exhibited higher levels of career certainty than both their counterparts in the revenue sports and females in non-revenue sports.

Results of the Secondary Research Question

The secondary research question sought to find whether or not a relationship exists between career certainty and perceived barriers to career decision-making. It was hypothesized that there would be a significant correlation between the two variables. To examine this question, a correlation analysis was performed, and results are presented in table 4.3. Analyses yielded significant correlations ($r=.357$, $p=.01$) between vocational identity and perceived barriers, as well as between vocational identity and lack of information ($r=.370$, $p=.01$), which confirm the hypothesis above. Barriers include: (a) uncertainty about one's ability to complete necessary education or training, (b) lack of financial means to pursue desired career, (c) lack of special talents to pursue a particular career, and (d) inability to gain the approval of an influential person toward pursuing a particular career. Lack of information pertains to areas such as: (a) how to find a job in a chosen career, (b) what kinds of people enter different occupations, (c) employment opportunities, and (d) how to get necessary training in one's chosen career.

With respect to the need for occupational information, between 59% and 79% of all athletes in the sample reported the need for the aforementioned items (a-d). Meanwhile, between 9% and 26% of all athletes identified the four items in the "Barriers" scale as actual obstacles to their career decision-making. This information was also analyzed with respect to type of sport (i.e. revenue and non-revenue) with similar findings for each group. Figures 2-5 represent all the descriptive information regarding career-related difficulties reported by the student athletes in the study.

Table 4.1

*Frequencies: Summary of Demographic Characteristics of All Participants (N=175)
by Type of Sport*

Sport	Revenue Frequency (Percent)	Non-Revenue Frequency (Percent)	Total Frequency (Percent)
Gender			
Male	63 (100)	49 (44)	112 (64)
Female	0 (0)	63 (56)	63 (36)
Class			
Sophomore	16 (25)	37 (33)	53 (30)
Junior	35 (56)	45 (40)	80 (46)
Senior	12 (19)	30 (27)	42 (24)
Athletic Scholarship			
Yes	53 (84)	85 (76)	138 (79)
No	10 (16)	27 (24)	37 (21)
Play Professionally			
Yes	46 (73)	27 (24)	73 (42)
No	17 (27)	85 (76)	102 (58)

Table 4.2

MANOVA: Means of Vocational Identity and Career Decision-Making Difficulties by Type of Athlete (N=175)

Variable	Type of Athlete		
	<i>Revenue Male</i> Mean (SD)	<i>Non-Revenue Male</i> Mean (SD)	<i>Non-Revenue Female</i> Mean (SD)
Vocational Identity	10.24 (4.68)	11.04 (4.57)	10.21 (4.97)
Occupational Information	1.27 (1.43)	1.27 (1.44)	1.06 (1.22)
Barriers	3.30 (1.09)	3.37 (1.01)	3.44 (.88)

Wilkes $\Lambda = .98$, $F(6, 340) = .47$, $p = .83$;

Table 4.3

Correlation between Vocational Identity and Career-Related Obstacles in Student-Athletes

Subscale	1	2	3
All athletes (N=175)			
1. Vocational Identity	--	.370**	.357**
2. Occupational Information	.370**	--	.134
3. Barriers	.357**	.134	--

Note. Values represent the Pearson correlation coefficient.

** . $p < .01$ (2-tailed).

Ancillary Analyses

Additional questions were considered to further explore some of the issues related to career decision-making for student-athletes. For instance, chi-square analysis was conducted to determine whether or not a relationship existed between an athlete's vocational identity and aspiration of other careers outside the athletic realm. The analysis indicated a marginally significant relationship $\chi^2(3, N = 175) = 6.754, p < .10$ between the two variables (see table 4.4). Although all other analyses utilize a .05 level of significance in this thesis, this particular analysis utilized a .1 level of significance, since it was exploratory in nature. It was thus reported that significantly more athletes with strong vocational identities (indicated by 12 or more "false" responses on the VI subscale—see Chapter III) considered careers beyond the athletic arena than athletes with weak vocational identities (11 or fewer "false" responses on the VI subscale). Table 4.5 depicts the results of a similar analysis used to determine the relationship between athletes' intent to play professional sports and their desire to pursue other careers besides athletics. Results from this analysis indicate a significant relationship between the two variables, $\chi^2(1, N = 175) = 19.816, p < .05$. That is, significantly fewer student-athletes who plan on pursuing professional careers in sports consider non-athletic careers than those student-athletes who do not plan on pursuing athletic careers. A follow up chi square analysis (see table 4.6) indicated a statistically significant difference in pursuing professional athletic careers in favor of the revenue-generating group, $\chi^2(1, N = 175) = 13.720, p < .05$. That is, significantly more student-athletes in

Table 4.4

Relationship between Vocational Identity and Career Aspirations Other than Athletics

	Other careers % yes	df	χ^2	Sig.
Vocational Identity				
Low (n=50)	76	--	--	--
Low/mid (n=53)	89	--	--	--
Mid/high (n=39)	90	--	--	--
High (n=33)	94	--	--	--
Total (N=175)	86	3	6.754	.080
$p < .10$				

Table 4.5

Relationship between Intent to Play Professionally and Career Aspirations Other than Athletics

	Other career aspirations % yes	df	Chi-square	Sig.
Intent to play professionally				
Yes (n=73)	73	--	--	--
No (n=102)	96	--	--	--
Total (N=175)	86	1	19.816	.000
$p < .05$				

Table 4.6

Aspirations of Professional Athletic Careers Among Revenue and Non-Revenue Student-Athletes

Athlete Type	Intent to play professionally			
	% yes	df	Chi-square	Sig.
Revenue (n=63)	73	--	--	--
Non-Revenue (n=112)	24	--	--	--
Total (N=175)	42	1	13.720	.000

$p < .05$

revenue generating sports expressed plans to pursue professional sports than non-revenue athletes.

Summary

The primary hypothesis that student-athletes in revenue generating sports will exhibit lower levels of career certainty than their counterparts in non-revenue sports was rejected due to a lack of a significant difference between the mean scores of the two groups. With respect to gender differences in career certainty within the non-revenue population, significant differences were also not observed.

A suspected relationship between career certainty and perceived barriers was confirmed. A correlation analysis revealed an inverse relationship between career certainty (as measured by the vocational identity scale of the survey instrument) and perceived barriers to decision-making, as well as between career certainty and lack of occupational information. Higher career certainty was correlated with fewer reported barriers and a lesser need for occupational information. Additional cross tabulation analyses indicated a significant relationship between athletes' desires to pursue professional careers in sports and their aspirations of other careers beyond the athletic arena. Career certainty was also significantly related to athletes' career aspirations beyond athletics. Finally, athletes in revenue generating sports were much more likely to consider professional athletic careers than their non-revenue counterparts.

The salience and implications of these results, along with the limitations of the study, are discussed in the following chapter.

CHAPTER V: DISCUSSION

This thesis examined several research questions related to aspects of career development for intercollegiate athletes. The primary research question sought to determine whether or not there is a difference in career certainty between athletes in revenue and non-revenue generating sports. Career certainty was measured by the Vocational Identity scale on the “My Vocational Situation-MVS” survey (Holland, et al., 1980). Hartung and Niles (2000) reported that an individual’s vocational identity is a strong indicator of his/her career certainty. The primary research question was also examined between male and female student-athletes. A multiple analysis of variance (MANOVA) was utilized to reveal the findings for this question.

The secondary research question assessed what relationship exists between career certainty and lack of vocational information, as well as vocational barriers. The latter two constructs were measured by the Occupational Information and Barriers subscales on the MVS. A correlation was performed to ascertain the results of this research question. Descriptive analyses in the form of frequencies were also conducted to provide information on the specific types of difficulties and barriers against career decision-making encountered by student-athletes.

Additional analyses were conducted to examine various other elements related to the career development of student-athletes. One of these analyses studied the relationship between vocational identity and career aspirations beyond athletics. The latter variable was also investigated in terms of the type of athlete (i.e. revenue

vs. non-revenue), as well as intent to compete professionally in athletics. All three queries utilized chi-square analyses.

Based upon the findings presented in the previous chapter, this chapter provides a discussion of the results with regard to the research questions of the study. Implications for practice and suggestions for future research are also presented in this chapter, in addition to the limitations associated with this study.

Career Certainty and Type of Sport

Given the established relationships of athletic participation on the career development of student athletes (Brown, et al., 2000; Murphy, et al., 1996; Sowa & Gressard, 1983), the primary research question of this thesis sought to examine these relationships for different *types* of athletes. Thus, the student-athlete sample in this study was broken down into two subgroups, consisting of revenue and non-revenue athletes. The only other study that has made such a distinction among the student-athlete population (Smallman & Sowa, 1996) had major limitations, including the lack of female student-athletes, a heavy concentration of first year students, and a questionable survey instrument. Nevertheless, the investigators did not find any significant differences in career maturity between revenue and non-revenue college athletes. Utilizing a more balanced sample and a more appropriate instrument, as well as exploring a different aspect of career development (i.e. career certainty), this study expected to find significant differences between the two groups of athletes. This expectation was based on previous research, which has revealed differences between these groups with respect to cognitive ability (Pascarella, et al., 1995), academic achievement (Pascarella, et al., 1999), and time demands (Brown,

et al., 2000). All of these factors have been reported to negatively relate to the career development of college athletes (Brooks, Etzel, & Ostrow, 1987; Brown, et al., 2000; Pearson & Petitpas, 1990; Petitpas, Brewer, & Van Raalte, 1996). Furthermore, since revenue athletes experience these factors on a more intense level, they were expected to exhibit lower levels of career certainty than their non-revenue counterparts in this study. However, results of the primary research questions suggest the contrary. No significant differences were observed between the revenue and non-revenue groups of the study with respect to career certainty. Despite the methodological improvements made from Smallman and Sowa's (1996) research, this study further confirms their findings, albeit with a slightly different construct (i.e. career certainty vs. career maturity). The lack of group differences may relate to identity foreclosure in athletes, which Brown et al. (2000) explain, is the result of overcommitment to their athletic roles and the consequent failure to explore alternative roles beyond the athletic realm. Thus, their relatively high level of career certainty may more appropriately reflect their focus on athletic pursuits than their engagement in career exploration. The nature of the questions on the MVS (see Appendix B) could very likely elicit responses associated with high career certainty, particularly from successful revenue athletes who are seriously planning for and pursuing professional athletic careers.

Career Certainty and Related Barriers

The secondary research question sought to understand some of the challenges associated with making vocational decisions, and to investigate what type of relationship these challenges have with career certainty. A correlation

analysis revealed that lack of occupational information and vocational barriers had significant correlations with career certainty. That is, lower levels of career certainty were accompanied by higher need for occupational information and a greater number of barriers. Although this finding is rather intuitive, it does support the validity of the survey instrument with the student-athlete population. This is useful to know, for no other previous career development studies had utilized the MVS with the college athlete population.

With respect to the specific challenges and barriers reported by the respondents of this study, a few highlights are worth mentioning. A significant proportion of athletes (59%) reported a need for information on occupational groups (i.e. what kinds of people enter different occupations). Sixty-nine percent needed information on how to find a job in their chosen careers. A remarkable 71% of the athletes felt that they could benefit from information regarding how to get the necessary training for their career choice. Finally, 79% of the participants requested more information about employment opportunities. Breaking down the sample into revenue and non-revenue sub-groups, it was observed that more non-revenue athletes (85%) needed information regarding employment opportunities than their revenue counterparts (70%). Such a difference may be due to fact that fewer non-revenue athletes plan on having professional athletic careers (see Table 4.6). Thus, they are more interested in learning about and pursuing alternative occupations or careers.

The high need for occupational information reported above undoubtedly relates to the fact that athletes spend the majority of their time either engaging in

sport-related activities (e.g. training, practice, competition, traveling, team meetings, etc.) or academics (study tables, tutoring, advising meetings, etc.), leaving little time for career exploration and planning. As has been reported earlier (Etzel et al., 1996), time spent on just sport-related activities can exceed 30 hours per week.

With respect to occupational barriers, almost 20% of the athletes expressed doubt regarding their ability to complete the necessary education or training for the career they have chosen to pursue. This may stem from the heavy emphasis athletes place on their sport, thereby limiting their opportunities to explore and develop other competencies that could serve them well in other areas, such as academics, vocational preparation, and life skills (Brown et al., 2000). Pearson and Petitpas (1990) also suggest that without input and validation from their sport, student-athletes have little to support their sense of self-worth and efficacy to pursue the careers they want.

More than a quarter of the athletes in the study indicated that they don't have the financial means to follow the career they most desire. Breaking the sample into revenue and non-revenue groups, this was a greater concern for revenue athletes (33%) than their non-revenue counterparts (21%). Sellers and Damas (1996) report that more than half of revenue athletes are athletes of color. The authors further suggest that these athletes come from economically disadvantaged backgrounds. Moreover, if these athletes are considering graduate or professional preparation for their careers, they may be concerned with the affordability of such programs.

A small proportion of the athletes in the sample (9%) felt that they did not have the special skills or talents to follow their first career choice. A comparable

amount of the athletes (12%) reported that influential persons in their lives do not approve of their vocational choice. One may wonder if these are the athletes who plan on pursuing professional athletic careers. Since the likelihood of securing a position in the professional ranks is so minimal (Muczko & Thompson, 1994), influential individuals (e.g. parents, relatives, coaches, friends, teachers, etc.) as well as the athletes themselves may express the above concerns regarding a professional career in athletics. As reasonable as this sounds, a cross-tabular analysis did not indicate such a connection between these barriers and plans to play professionally. Thus, the small proportion of athletes who do report the above barriers do so irrespective of the type of careers they are pursuing.

All of the challenges and barriers described above help explain the low levels of career maturity previously observed in student-athletes as compared with non-athletes (Kennedy & Dimick, 1987; Sowa & Gressard, 1983). The many unique challenges associated with participating in intercollegiate athletics (e.g. time demands, competitive pressures, celebrity status, overcommitment to athletic role, etc.) seem to impede a student-athlete's career development in several ways including career maturity, vocational identity, and decision-making.

Student-Athletes and Their Career Aspirations

Additional analyses were conducted to examine the career aspirations of student-athletes, and how they related to variables such as their intent to pursue professional athletics, their vocational identity, and their status as revenue or non-revenue athletes. Several interesting results were generated utilizing a chi-square analysis. For instance, a significant pattern was observed between vocational

identity and aspirations to pursue non-athletic careers. Athletes who exhibited high levels of vocational identity were more likely to consider careers beyond the athletic arena, whereas those with lower levels of vocational identity more often tended to focus on their particular sport as a career aspiration. The ability to identify and consider various career options usually suggests that an individual has engaged in at least some career exploration, which is an essential component to vocational development (Super, 1957). This development is reflected in the relatively higher levels of vocational identity observed in these athletes.

A significant pattern was also found between the athletes' intent to pursue professional athletics and their non-athletic career aspirations. This implies that, of the athletes who expressed plans to pursue professional athletics, fewer considered other (non-athletic) careers than those athletes who did not have plans of playing professionally. This finding may seem quite obvious at first. One may infer that if college athletes plan on pursuing athletics professionally, they would not consider other careers. This would be the case if they were asked to respond dichotomously to this survey question. However, this particular question on the survey was an open ended one, asking respondents to indicate all careers/occupations they were considering at the time. Thus, they could potentially list a professional athletic career, along with a number of other non-athletic careers they may be considering. In fact, many student-athletes in the sample did this. In addition to this open-ended question, student-athletes were also asked whether or not they had actual plans to play professionally in their sport. Those who responded "yes" were less likely to consider non-athletic careers than those who did not indicate such plans. Based on

this result, a student-athlete's intent to play professionally may impede their likelihood to pursue other careers. Those athletes who mentioned additional career possibilities despite having plans to play professionally (73% of the sample) might have made the realization that climbing to the professional ranks is so rare even among elite college athletes, and recognize the benefit of having alternative careers in mind, in the event they are unable to play professionally. For those athletes who have not made this realization and have not made alternative vocational plans, the possible abruptness of their athletic careers (as a result of injury, graduation from college, or failure to be recruited by a professional team) will pose a difficult situation (Martinelli, 2000).

Inevitably, the curious reader would wonder how revenue and non-revenue athletes compared in terms of their plans to play professionally. Results demonstrated a significant difference between the two groups in this area. In fact, nearly three-quarters of the revenue athletes reported plans to play professionally, as compared to less than one quarter of the non-revenue athletes. This finding is not surprising, since the traditional revenue sports (i.e., men's basketball and football) offer lucrative professional tracks to those athletes capable enough to be drafted. Conversely, non-revenue sports, such as swimming, gymnastics, or field hockey, do not typically offer such professional opportunities. There are a few non-revenue sports that could provide college athletes with opportunities to compete professionally, such as baseball, volleyball, or soccer. Although this study does not include data for each sport, observations indicate that players in these latter three

sports are who mainly comprise the 24 percent of the non-revenue group with plans to pursue professional athletic careers.

With respect to specific occupational/career plans (excluding professional athletics), respondents mentioned a variety of areas ranging from business to science (See appendix E). The top five areas of interest included (a) teaching, (b) coaching (c) advertising/marketing, (d) business, and (e) law. From a typological perspective, these vocational interests allude to Holland's (1973) Social and Enterprising types. These choices also reflect a sense of practicality and realism on the athletes' part when thinking about careers. As suggested by McBride and Reed (1998), athletes often find themselves in highly structured environments that focus on concrete and tangible outcomes, thereby limiting their potential to be imaginative and creative. This assessment may help explain why certain types of careers are more popular with athletes than others.

Limitations

As with any quasi-experimental research design, this study included several limitations that will be addressed in this section. First, it is important to remember that 75 of the surveys were not included in the study due to the fact that they were completed by first-year students (51), or that they were returned incomplete (24). For the latter group of athletes the failure to complete the survey may suggest confusion toward the items on it or ambivalence toward the idea of thinking about vocational issues. Since these incomplete surveys were not included in the study, one may wonder how they could potentially influence the results.

The fact that the study took place at a large, land-grant institution on the East Coast also limits the generalizability of its findings. If, for instance, the same study were replicated at a small, private, liberal arts school in the Midwest, the outcomes may be different. Therefore, caution must be used in generalizing the findings of this study to all student-athletes. Also, since the current study did not include race as a variable, the findings may not accurately apply to racially heterogeneous samples. Although respondents were not asked to report their race, observations suggest a fairly homogenous sample (mostly Caucasian non-revenue group and mostly African American revenue group).

The conditions under which the team meetings were held could also have confounding effects on the participants' responses. Whereas some teams held their meetings in a classroom environment at a dedicated time, others (particularly those difficult to access) were surveyed in locker rooms directly after practice. These varying conditions could have an impact on the athletes' mindset, thereby influencing their responses to questions that require a certain degree of contemplation and reflection.

Given some of the interesting findings of this thesis, it would have been helpful to have information regarding the specific sports in which the athletes participated. For instance, the study revealed that 73% and 24% of revenue and non-revenue athletes, respectively, reported plans of playing their sport professionally. Although the statistic for the revenue group is not surprising, it would have been helpful to know which non-revenue athletes (of the 24%) had plans to play professionally. Had this study included information on the specific

sport, it would have been able to examine career certainty between athletes in different sports (e.g., team sports versus individual sports). Since this study lacks such information, these analyses could not be made.

The final limitation is associated with the survey instrument utilized in the study—MVS. As mentioned in Chapter III, the MVS contains items that require “True/False” or “Yes/No” responses. Admittedly, such dichotomous responses may be too difficult or feel too restricting for participants to indicate, particularly with items that elicit conflicting reactions. Thus, the survey cannot reflect the depth and complexity of the respondents’ thoughts and feelings regarding the items presented. The multiple questions alluding to the various dimensions of career decision-making, however, helps compensate for this limitation. *It should also be noted that* the instrument holds high construct validity with the student-athlete population surveyed in the study. The following section provides suggestions for future research, which can assist in mitigating some of the limitations of this study, as well as provide additional information about the complexities of career decision-making for college student-athletes.

Implications for Practice

The findings of this study suggest that there is no significant difference between student-athletes in revenue and non-revenue sports with respect to career certainty. This result is somewhat counter-intuitive, given the already established differences reported between revenue and non-revenue athletes in other developmental areas (Brown & Hartley, 1998; Pascarella et al., 1995). The challenges and pressures associated with intercollegiate athletic participation are

also intensified for revenue athletes, who are often viewed as celebrities with often unrealistic expectations imposed upon them (Ferrante et al., 1996). Despite these reported challenges, the results of the primary research question did not support the hypothesis that differences in career certainty would be observed between the two types of athletes. However, this study did yield other insightful findings that offer deeper explanations of the vocational concerns of student-athletes. Despite no significant differences in career certainty between the two types of athletes, a significant difference was observed in their plans to pursue professional sports. Seventy-three percent of revenue generating athletes indicated plans to play professionally in their sport, as compared to only 24% of non-revenue athletes. Although this statistic is not surprising in and of itself, it does provide some insight for career counselors when related to other career aspirations athletes have. Of the athletes who plan on playing professionally, fewer contemplate alternative (non-athletic) careers than those without plans to play professionally. Based on the findings of their study, Brown and Hartley (1998) associate alternative career plans with career maturity in student-athletes. That is, college athletes with plans to pursue careers other than sports exhibit higher career maturity than those solely considering a professional athletic career. Combining the findings of the Brown and Hartley (1998) study with those from this thesis suggest that revenue athletes—despite relatively similar career certainty to their non-revenue counterparts—do exhibit lower career maturity. This idea should prompt career counselors to assist particularly the revenue athletes with exploring and identifying alternative careers beyond athletics. This process of exploration encourages athletes to not only learn

about the various employment possibilities and opportunities, but to also see themselves outside what can often be a restricted athlete role (Ogilvie & Howe, 1986). Such activities also increase career maturity in athletes, so that they can make more informed decisions regarding vocational choice, rather than narrowly pursuing professional sports with little chance of actualization.

A statistically significant relationship between vocational identity and alternative career aspirations was also observed in this study. Athletes with high levels of vocational identity were more likely to consider alternative careers than those with low levels of vocational identity. Higher levels of vocational identity imply clarity and stability of one's career-related attributes (Hackett & Watkins, 1995), which enables individuals to identify multiple careers that are congruent with their attributes. Conversely, if one is not clear about one's own attributes, he/she will experience greater confusion about what occupations/career might suit him/her. Athletes with lower levels of vocational identity could potentially benefit from feedback regarding their skills, abilities, strengths, and weaknesses, particularly in areas outside of athletics. Such feedback can be provided by instructors, counselors, advisors, and other individuals with whom athletes have a trusting relationship. Feedback from influential persons, such as coaches, mentors, and family, can also be poignant. In turn, athletes can use this information, along with the assistance of a counselor, to help strengthen their self-concept and efficacy in career decision-making.

The difficulties and barriers expressed by the student-athletes in this study also have practical implications worth considering. With respect to occupational

information needs, 59 to 79% of the athletes surveyed expressed the need for additional information regarding (a) how to find a job in one's chosen career, (b) what kinds of people enter different occupations, (c) employment opportunities, and (d) how to get the necessary training in one's chosen career. Career counselors can utilize a variety of methods to deliver these types of information to student-athletes. These methods may include one-on-one counseling, assessment instruments (e.g. Strong Interest Inventory, Self-Directed Search, Myers-Briggs Type Indicator, etc.), and workshops addressing various components of career development (resume writing, job interviewing, securing internships, etc.). Another intervention to help student-athletes with these needs might be to offer introductory courses that cover career-related principles such as self-assessment, career exploration, planning, and decision-making. Such courses can be integrated into the athletes' academic course load, which will enable them to intentionally think about and prepare for a vocation, without the pressure to seek counseling.

Although fewer athletes reported occupational barriers (9%-26%), they do present additional practical implications worth considering. For instance, for those athletes who express uncertainty regarding their talents and skills to follow their career choice, career counselors can utilize this information to explore with the athletes the types of careers they are considering, and determine which aspects of these careers make them feel ambivalent about their abilities and skills. As this information is revealed, counselors (as well as instructors, advisors, tutors, etc.) can work with athletes to focus on developing and enhancing these skills.

More than a quarter of the student-athletes in this study mentioned they did not have the financial means to pursue their first career choice. This can be a disappointing realization for athletes, making them feel as if they need to settle for a less desirable career. This concern may also be a function of these athletes not ever having to think about financial matters. Since nearly 80 percent of the athletes surveyed were on athletic scholarship, they may not be familiar with other sources of financial aid (grants, loans, etc.) that could potentially assist them in pursuing the career they most desire. This would particularly be the case if an athlete were thinking about graduate or professional school, and were unsure about how to finance this endeavor. This is where counselors and financial aid advisors could be beneficial.

For the nearly 20% of athletes who feel uncertain about their ability to complete the required education/training toward their desired career, counselors may help them explore where the uncertainty stems from. As mentioned earlier, some student-athletes, having solely focused on their athletic roles, may not have had the opportunity to develop competencies in other areas of life, and thus lack the self-efficacy in these areas. However, individuals working with athletes can help provide validation in other aspects of their lives (e.g., academic, social, vocational) to help them see themselves beyond their athletic roles. Positive feedback, rewards, and empowerment are some strategies for offering student-athletes with such validation.

Over a tenth of the athletes surveyed also reported that some influential persons in their life do not approve of their vocational choice. The intuitive

explanation may be that such disapproval is perhaps toward those athletes who only consider professional athletic careers, thereby concerning individuals who care about their future vocational stability. However, a cross-tabular analysis suggested that there was no relation between the career aspirations of athletes and disapproval from others. Nevertheless, this is a common concern brought up in career counseling by many clients, and is a difficult one for counselors to work with (Lucas, personal communication, March 12, 2002). However, counselors can still be helpful by assisting clients to confront such disapproval and reconcile the inner conflict between their personal aspirations and pleasing others.

It is critical for these counselors to be familiar with the common issues and barriers facing athletes and tailor their intervention methods to meet their needs. This also includes familiarity with the time demands placed on athletes, in order to schedule programs and services during more convenient times. Given these caveats, staff members within athletic departments are likely to serve student-athletes more effectively than individuals employed outside the department (i.e. campus career center).

Although many Division I institutions dedicate staff members to work specifically with the student athlete population in counseling/advising capacities, research indicates that only 8% of their work was described as “vocational counseling” (Brooks et al., 1987). This is not a surprising statistic, for the primary focus of staff working with the athletes is to keep them academically eligible to compete (Brooks et al., 1987). However, this implies that student-athletes do not receive adequate vocational intervention, which many of them seem to need.

In 1994, the National Collegiate Athletic Association (NCAA) developed a Life Skills program to help meet this need and offer a more holistic intervention with student-athletes. The program, called Challenging Athletes' Minds for Personal Success (CHAMPS), includes five areas supporting the development of student-athletes: (a) academic excellence, (b) athletic excellence, (c) personal development, (d) career development, and (e) service (Martinelli, 2000). The NCAA provides assessment tools, administration manuals, and instructional materials to help implement the program. Each area is divided into focus segments that provide staff members with structure and guidance to more intentionally assist athletes with the developmental tasks associated with the area. As of July 1998, the CHAMPS program had been implemented at nearly 250 institutions, mostly Division I (Martinelli, 2000). Based on the findings of this and other studies (Brown & Hartley, 1998; Smallman & Sowa, 1996; Sowa & Gressard, 1983), the CHAMPS program seems like an appropriate intervention for student-athletes, and should therefore continue to be adopted by institutions, particularly those with Division I athletic programs.

In working with the career development of college athletes, the issue of defining a "career" becomes an important one. It can be argued that the academic culture in higher education, while promoting creative expression, critical thinking, and intellectual achievement, places little worth on athletic endeavors, thereby negating any legitimacy of athletics as a career. Although many colleges and universities have programs and services to promote career development, they are mainly concerned with traditional careers, such as law, business, engineering, and

medicine. The technological boosts in recent years may have expanded the notion of careers to fields such as marketing, information technology, and network support; however, a career as a professional athlete is still excluded from the paradigm. A reason for this exclusion may be due to the fact that only one percent of college athletes successfully enter professional athletic careers, despite many more who express interest in doing so (Muczko & Thompson, 1994). For the remaining 99 percent, many of whom remain solely focused on athletic careers, the issue of realism must be addressed. If, for instance, a football player intends to play professionally, even as he nears the end of his eligibility, not having significant playing time, he must realize that there is nearly no chance that he might be recruited from professional scouts (Martinelli, 2000). Others who are able to start for a college team may not demonstrate the same level of athletic talent as other players in their conference or across the nation. However, for the elite few who do have realistic opportunities to compete professionally, perhaps they should be encouraged to do so. After all, such an experience is an extremely rare and rewarding opportunity that college athletes should take advantage of, while they find themselves in the position to do so. For these top few athletes who are more or less guaranteed spots on professional sports teams, trying to engage them in career planning outside the athletic arena is not only difficult, but often ineffective. Rather, counselors can better spend their time and energy helping athletes acquire skills that will be beneficial in the professional ranks. These might include working with agents, media relations, coping with injuries, negotiating corporate endorsements, maintaining a private life, and other common issues professional

athletes encounter. Of course, these are areas that coaches, role models, and other influential people can help athletes with, particularly if they have experience working or performing in professional sports. Although the traditional career planning and information providing methods can be valuable for most athletes, helping professional-bound athletes in the ways mentioned above might prove more worthwhile for them.

Directions for Future Research

Although no significant differences were found with respect to career certainty among the two groups of student athletes in this study, future research can help determine whether or not career certainty can predict career satisfaction. This would require a longitudinal approach that would examine the extent to which the athletes' reported level of career certainty influences their career satisfaction later in life. The findings from this type of study can help ascertain whether or not career certainty is a legitimate construct to examine in relation to the long-term career development of student-athletes. Of course, this type of study can also provide helpful information about the general college student population.

Another longitudinal study may be worth conducting to determine student-athletes' plan to pursue professional sports changes over time. One may speculate that as athletes progress through their college careers, they become more realistic about their chances of playing professionally in their sports. Although college athletics can serve as a stepping-stone to the professional ranks for some athletes can also help provide others with a reality check by exposing them to elite levels of competition.

Since some athletes in this study reported feeling unsupported with their primary vocational choices, a future investigation, qualitative in nature, could explore the role of influential persons in their vocational development. These individuals may include family members, coaches, and other figures that typically play significant roles in the lives of athletes. Findings from such a study may provide significant implications for counseling college student-athletes. Other qualitative studies may help more deeply examine some of the other barriers reported by athletes in this study (e.g. uncertainty regarding finishing necessary education/training, low vocational self-efficacy, etc.).

An additional recommendation for future research alludes to instrumentation. Although the MVS is an effective instrument to utilize with the student-athlete population due to its brevity and simplicity, a similar instrument with additional response choices may be helpful in more accurately determining how athletes feel about making career-related decisions. For instance, an instrument similar to the MVS, but with a Likert scale format that includes several responses ranging along a continuum (e.g., strongly agree to strongly disagree) could provide respondents with more options for answering the survey questions than the MVS allows. The “True/False” method in the MVS forces respondents to answer dichotomously to the survey items, which could help explain the amount of incomplete surveys submitted by the sample in this study. If this explanation is legitimate, providing respondents with more flexibility to respond may help yield a higher rate of completed surveys in future studies. Utilizing a survey with more options for responses could also augment the variance of the responses.

A final suggestion for future research is to assess the effectiveness of the CHAMPS program mentioned earlier in the chapter. Although the premise and desired outcomes of the program seem legitimate, empirical data evaluating its effectiveness would be helpful in continuing its implementation.

Summary

Although the current study failed to find any significant differences between the career certainty of revenue and non-revenue college athletes, it did provide several pieces of information that are important to know in working with this population. First, the study did find a significant relationship between the vocational identity of athletes and their career aspirations. Based on the findings, student-athletes with lower vocational identity were less likely to consider alternative careers beyond sports. Conversely, student-athletes with higher levels of vocational identity were more likely to consider such careers. The current study also found a significant relationship between career aspiration and the intent to pursue professional athletics. That is, fewer athletes with plans to play professionally in their sport had alternative vocational plans. Furthermore, since considerably more revenue athletes expressed intent to play professionally than their non-revenue counterparts, it can be concluded that they have fewer alternative career plans. Finally, this study provided helpful information regarding some of the challenges and barriers student-athletes face in making career-related decisions. These findings contribute to the existing body of knowledge on the career development of student-athletes and provide further evidence of the difficulties they experience in making vocational choices. Future research can capitalize on the findings of the current

study to help determine the relationship between vocational identity and job satisfaction, the effectiveness of life skills programs such as CHAMPS, and the role of influential persons in the career development of college athletes. Professionals working with student-athletes can utilize this and other studies to develop more focused and appropriate interventions toward their career development.

Appendix A

Script Read to All Participants of the Study

“I am a graduate student in the College Student Personnel program conducting a research study about the career development of student-athletes. My study serves as a requirement to graduate with a Master of Arts degree from my program. The survey you are about to complete contains statements that relate to choosing a career. You will be asked to respond to these statements in either True/False or Yes/No format. For all the True/False statements, please select the response that you agree with most. Although you may not think that a particular statement is completely True or completely False, please try to indicate which of the two responses better represents your opinion about the statement. You should take a similar approach to the Yes/No statements. Stapled to the survey is a half sheet containing additional questions, so please be sure to complete it as well. The entire survey will take you no more than 15 minutes to complete. Since this survey is anonymous and all of your identities will remain confidential, please feel free to respond as honestly as you can. Any reported results will be based on group data. If at any point, you wish to discontinue taking the survey for whatever reason, you may do so with no questions asked. By submitting a completed survey, however, it is assumed that you have consented to participating in the study. Thank you very much for your assistance and cooperation.”

Appendix B

My Vocational Situation

List all the occupations you are considering right now:

_____	_____
_____	_____
_____	_____

Try to answer all the following statements as mostly TRUE or mostly FALSE.
Circle the answer that best represents your present opinion.

In planning for an occupation or career:

- | | | |
|---|---|---|
| 1. I need reassurance that I have made the right choice of occupation. | T | F |
| 2. I am concerned that my present interests may change over the years. | T | F |
| 3. I am uncertain about the occupations I could perform well. | T | F |
| 4. I don't know what my major strengths and weaknesses are. | T | F |
| 5. The jobs I can do may not pay enough to live the kind of life I want. | T | F |
| 6. If I had to make an occupational choice right now, I am afraid I
would make a bad choice. | T | F |
| 7. I need to find out what kind of career I should follow. | T | F |
| 8. Making up my mind about a career has been a long and difficult
problem for me. | T | F |
| 9. I am confused about the whole problem of deciding on a career. | T | F |
| 10. I am not sure that my present occupational choice or job is right
for me. | T | F |
| 11. I don't know enough about what workers do in various occupations. | T | F |
| 12. No single occupation appeals strongly to me. | T | F |
| 13. I am uncertain about which occupation I would enjoy. | T | F |
| 14. I would like to increase the number of occupations I could consider. | T | F |
| 15. My estimates of my abilities and talents vary a lot from year to year. | T | F |
| 16. I am not sure of myself in many areas of life. | T | F |

- | | | |
|--|---|---|
| 17. I have known what occupation I want to follow for less than one year. | T | F |
| 18. I can't understand how some people can be so set about what they want to do. | T | F |

For items 19-20, circle YES or NO.

19. I need the following information:

- | | | |
|--|---|---|
| How to find a job in my chosen career. | Y | N |
| What kinds of people enter different occupations. | Y | N |
| More information about employment opportunities | Y | N |
| How to get the necessary training in my chosen career. | Y | N |
| Other: _____ | | |

20. I have the following difficulties:

- | | | |
|--|---|---|
| I am uncertain about my ability to finish the necessary education or training. | Y | N |
| I don't have the money to follow the career I want most. | Y | N |
| I lack the special talents to follow my first career choice. | Y | N |
| An influential person in my life does not approve of my vocational choice. | Y | N |
| Anything else? _____ | | |

Appendix C

Supplemental Information Sheet

21. Are you on athletic scholarship at the University of Maryland? Y N
22. Do you plan on playing professionally in your sport? Y N
23. What sport do you play for the University of Maryland? _____
24. Please circle your gender Male Female
25. Please circle your year in school. Fr So Jr Sr

Appendix D

Results of Reliability Analysis for the MVS

Variable	Cronbach's Alpha
Vocational Identity	.8611
Occupational Information	.7495
Barriers	.6447

Appendix E

List of Reported Occupations/Careers Considered by Athletes in the Study (Does Not Include Sport They Play)

Occupation/Career (Frequency)	
1. Teaching/Education (24)	19. Sports Agent (5)
2. Coaching (22)	20. Public Relations (5)
3. Advertising/Marketing (including sports) (19)	21. Newscaster/Reporter (5)
4. Business/Entrepreneurship (15)	22. Athletic Training/Sports Med. (5)
5. Lawyer (12)	23. Doctor (5)
6. FBI/Criminal Justice (11)	24. Actuary (4)
7. Engineer (chemical, mechanical, etc.) (10)	25. Correctional/Parole Officer (4)
8. Financial Consultant Analyst (10)	26. Pharmaceutical Representative (4)
9. Sales (9)	27. Banking (4)
10. Computer Graphics (8)	28. Social Work (4)
11. Psychology (child, family, sports, etc.) (8)	29. Management (3)
12. Physical Therapy (7)	30. Stockbroker (3)
13. Computer Programming (6)	31. Politics (3)
14. Counselor (6)	32. Economist (3)
15. Police Officer (6)	33. Novelist/Writer (3)
16. Personal Trainer (5)	34. Government Employee (3)
17. Webmaster (5)	35. International Relations (3)
18. Journalist (5)	36. Information Systems (3)
	37. Dentist (3)

38. Public Health (2)
39. Communication (2)
40. Farmer (2)
41. Peace Corps (2)
42. Youth Advisor (2)
43. Sports Commentator (2)
44. Ecology (2)
45. Psychiatrist (2)
46. Publishing/Editing (2)
47. Scientist (2)
48. Researcher (2)
49. Lab Technician (2)
50. Guidance Counselor
51. Physical Education
52. Recreation
53. Insurance Broker
54. Telecommunications
55. Music Critic
56. Professional Fisherman
57. U.S. Coast Guard
58. U.S. Marshall
59. Animation
60. Interior Design
61. Human Resources
62. Bartender
63. Construction
64. Hotel Management
65. Stripper (Female)
66. Park Ranger
67. Scuba Instructor
68. Racecar Driver
69. Tour Guide
70. Sports Management
71. Zookeeper
72. Animal Research
73. Veterinarian
74. Conservation
75. Geology
76. Geographer
77. Actor
78. Dancer
79. Environmental Assessment
80. Radio Disc Jockey
81. Screenwriter
82. Expedition Leader
83. Marine Biologist

84. Work for Footwear Company

85. Real Estate

86. Speech Pathologist

87. Computer Security

88. Professor

89. Medical Research

90. Exercise Physiology

91. Accountant

92. Graduate School

93. Freelance Writer

94. Nurse

95. Fashion

96. Foods

97. Industrial Design

98. Home Remodeling

99. Transportation

100. Pastor

101. Funeral Director

102. Graphic Art

103. Vineyard Manager

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