

2011

Community college athletes: The influence of the chance to compete on college choice

Patricia Ann Rinke
Iowa State University

Follow this and additional works at: <https://lib.dr.iastate.edu/etd>

 Part of the [Educational Administration and Supervision Commons](#)

Recommended Citation

Rinke, Patricia Ann, "Community college athletes: The influence of the chance to compete on college choice" (2011). *Graduate Theses and Dissertations*. 12045.
<https://lib.dr.iastate.edu/etd/12045>

This Dissertation is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Community college athletes: The influence of the chance to compete on college choice

by

Patricia Ann Rinke

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Educational Leadership)

Program of Study Committee:
Daniel C. Robinson, Major Professor
Robyn Cooper
Larry H. Ebbers
Frankie Santos Laanan
Mack C. Shelley

Iowa State University

Ames, Iowa

2011

TABLE OF CONTENTS

LIST OF FIGURES	iv
LIST OF TABLES	v
ABSTRACT	vii
CHAPTER 1. INTRODUCTION	1
Background	1
Statement of the Problem	2
Purpose of the Study	4
Methodological Approach	5
Research Questions	5
Significance of the Study	6
Limitations	6
Delimitations	7
Definition of Terms	7
Summary	8
CHAPTER 2. LITERATURE REVIEW	10
Introduction	10
Background	10
Higher education differentiation	10
Identity Issues among Community Colleges	13
Traditional Students and Community Colleges	22
Role of Athletics in the Community College	22
Studies on College Choice	25
College choice	26
Community college students	27
Student athletes	30
Community college student-athletes and role	31
Gender	31
Race and ethnicity	32
Type of sport	33
Institutional classification and region	34
Conceptual Models	36
Theoretical Framework	41
Economic theory	41
Sociological theory	43
Psychological theory	44
Combined theoretical models	45
Perna's theory	46

Satisfaction	49
Implementing Models on Choice and Satisfaction	50
Summary	51
CHAPTER 3. METHODOLOGY	52
Overview	52
Research Questions and Hypotheses	52
Epistemology and Theoretical Perspective	55
Research Design and Methodology	56
Population and Sample	57
Data Collection Methods	59
Instrumentation	60
Pilot Study	61
Survey Administration	61
Equity in Athletics Data Analysis	62
Carnegie Classification of Community Colleges	62
Variables	63
Dependent	63
Independent	65
Data Analysis	72
Ethical Issues	72
CHAPTER 4. DATA ANALYSIS AND RESULTS	74
Descriptive Statistics	76
Demographic characteristics	76
Academic background and goals	77
College search process and athletic goals	79
Gender	87
Race and Ethnicity	90
Distance from Home	93
CHAPTER 5. DISCUSSION, CONCLUSIONS, AND IMPLICATIONS	101
Findings	103
Implications for Practice	109
Recommendations for Further Research	111
Conclusion	113
APPENDIX. COMMUNITY COLLEGE STUDENT ATHLETE SURVEY	114
REFERENCES	126
ACKNOWLEDGMENTS	134

LIST OF FIGURES

Figure 2.1.	Population trends impacting community colleges, U.S.	15
Figure 2.2.	Projection of high school graduates, New England (1992-2022)	16
Figure 2.3.	Projection of high-school graduates, middle states (1993-2022)	17
Figure 2.4.	Projection of high-school graduates, Midwest (1993-2022)	18
Figure 2.5.	Percent population change in the United States, 1990 to 2000	19
Figure 2.6.	Iowa counties by percent change in population, 2000-2008	20
Figure 2.7.	Number of high school graduates, West, 1992-2002	21
Figure 2.8.	Number of high school graduates, South, 1992-2002	21
Figure 2.9.	Number of high school graduates, Southwest, 1992-2002	21
Figure 2.10.	Various sets related to student choice	40
Figure 2.11.	Perna's conceptual model for student choice	47
Figure 4.1.	Corresponding screeplot for number of factors	82

LIST OF TABLES

Table 2.1.	Summary of three leading models on student choice	36
Table 3.1.	Athletic conferences, institutions, and number of athletes	58
Table 3.2.	Survey instrument components	60
Table 3.3.	Community college Carnegie classifications using Katsina's model	63
Table 3.4.	Ultimate dependent variables relative to reaffirmation of choice	64
Table 3.5.	Independent variables	65
Table 3.6.	Research questions and data analysis techniques	73
Table 4.1.	Descriptive statistics for the demographic characteristics	77
Table 4.2.	Academic background and goals	78
Table 4.3.	College search process and athletic goal	79
Table 4.4.	Primary sport participating in	80
Table 4.5.	Rotated factor matrix for principal factor analysis based on importance	83
Table 4.6.	Factor reliability	84
Table 4.7.	Factor names	85
Table 4.8.	Mean factor responses	86
Table 4.9.	Raw means and rank for choice based on gender	88
Table 4.10.	Tests of normality with factor constructs	89
Table 4.11.	Differences between females and males on factor responses	91
Table 4.12.	Raw means and rank in choice based on minority status identification	92
Table 4.13.	Differences between minorities and non-minorities on factor responses	93
Table 4.14.	Raw means and rank in choice based on distance from home	94

Table 4.15. Differences between factor responses based on distance from hometown	95
Table 4.16. Collinearity diagnostics	97
Table 4.17. Mahalanobis distance – extreme values	98
Table 4.18. Regression coefficients for affirmation of choice without opportunity to play	99
Table 4.19. Regression coefficients for affirmation of choice	100
Table 5.1. Number of athletes and percentage of FTE	101
Table 5.2. Factor names	105

ABSTRACT

Intercollegiate athletes are an important and viable group of students for many colleges, including community colleges. These students can add to the student life experience, increase exposure of institution to the community, and enhance enrollment. Despite the large number of community college athletes, there is little literature on the experiences, recruitment, and college choice patterns of community college athletes.

Currently, there are a few studies on college choice of college athletes; however, most of this literature focuses on athletes in powerhouse programs. There are also studies on college choice of community college students; however, this literature generally does not focus on particular segments of traditional aged students. Thus, there is a paucity of literature on the college choice patterns of community college athletes. Given the trend for smaller four-year colleges to use athletics for enrollment management and the declining population in some areas where community colleges are struggling to diversify enrollment, it seems prudent to understand the factors influencing community college athletes' college choice.

This study developed a survey and identified factors that influenced college choice of community college athletes. It also examined the relationship between college choice factors and affirmation of choice of college. The study was conducted at eight community colleges and descriptive statistics were used to determine the background of participants. Factor analysis was conducted to reduce the 47 items into fewer, related variables and logistic regression was used to examine the relationship of college choice factors to affirmation of choice.

Results of the study identified the background and characteristics of the athletes, the factors influencing college choice, differences in the factors with various populations, and then the relationship of the factors to affirmation of choice. Results indicated that various attributes associated with the opportunity to engage in intercollegiate athletics were critical to college choice.

CHAPTER 1. INTRODUCTION

Background

That growth [NJCAA members] is being fueled mostly by public [community] colleges, some hoping to attract more students and others trying to satisfy a growing number of 18- to 24-year-olds who are demanding a traditional college experience, complete with athletics. Interest in sports programs is particularly strong at community colleges in the Midwest, which are trying to increase their enrollment, and in North Carolina, Pennsylvania, and Virginia. (Ashburn, 2007)

Higher education is increasingly clouding the distinctions between the various sectors within the higher education industry. Fifty years ago, the Carnegie caste system's characterizations of an institution identified an institution's function and mission for students. Today, the lines between the sectors in higher education are hazy, as institutions increasingly seek new ways to compete, add programs and offer modalities, and serve different segments of students. The two-year college is no exception. This segment offers bachelor degrees, more liberal arts credits than vocational-technical credits, and student life previously atypical at many two-year institutions.

Unfortunately, the postmodern evolution in the community college sector is not without its challenges. This sector faces tremendous pressure from the local community it serves, with programs from the taxpayers who frequently are asked to vote in support of growth, as well as the local and state governmental regulatory structure, and the federal government with demands of accountability and affordability in education, as well as from students, faculty and staff. Furthermore, the community colleges have traditionally relied on the local community to provide its students—its consumers. Using a product-oriented strategy, community colleges have offered programs intended to meet community needs,

resulting in students 'demanding' programs via enrollment. This model uses product development as the promotion for the institution, almost an "if you build it, they will come," and then come primarily from the local community.

Students' needs and wishes have changed. Whether due to the economy, the desire to begin at the community college, or simply the inclusion of the community college in the student "choice set," students are not always opting to the community college simply for a particular academic or vocational program. With this change, and with increasing population shifts resulting in declines in some communities, some community colleges will see, if not already, the need to coordinate marketing efforts, focusing increasingly on market-oriented strategies to begin to recruit students (Warwick, Jacquelyn, & Mansfield, 2004). Successful recruitment requires a thorough understanding though of consumer behavior; in higher education, student consumer behavior is referred to as student choice.

Statement of the Problem

Multiple studies have looked at student choice and the factors that influence students to select a particular college. Many of these studies have addressed student choice from a general perspective (Litten, 1982; Martin, 1991; Murphy, 1981; Paulsen, 2002) and, of the studies surrounding the community colleges, many are looking at student choice factors for populations traditionally associated with limited access to college (Kelp Kern, 2000; O'Connor, 2009; Townsend, 2003). A few studies have focused on the influence of athletics to draw and satisfy students (LeCrom, 2009; Marx, & Huffmon, 2008; Vallerand, 1999), but very few studies have examined the role of athletics at the community college. Nevertheless, if community colleges increasingly seek to use sports to either increase enrollment through

market development or penetration, or to alter or enhance the student life experience of existing community college students, this sector in higher education needs to understand how and why its athletes choose to attend their institution of choice, possibly over other competing intercollegiate athletic programs.

The National Collegiate Athletic Association (NCAA) serves over 380,000 student athletes at over 1,200 member institutions (Welcome to NCAAstudent.org, 2009). The National Association of Intercollegiate Athletics (NAIA) serves over 45,000 student athletes at over 280 member institutions (History of the NAIA, 2009). Community colleges athletic programs do not have the wide-reaching governing bodies typically observed in four-year institutions. While the National Junior College Athletic Association (NJCAA) does govern 525 community colleges, including their 54,000 student athletes, not all community colleges participate in this association (National Junior College Athletic Association Home Page, 2010). The California Community College Athletic Association (CCCAA) is the athletic association for California Community Colleges as California; like a few other states, it does not participate in the NJCAA but, rather, operates independently (Athletics, 2009). Second in size to the NJCAA, the CCCAA serves approximately 25,000 athletes at 107 California community colleges. California's community college systems enrolled over 1.4 million students in the 2010 academic year, or 27% of the nationwide community college population (Athletics).

Despite the 79,000 student athletes engaged in either NJCAA or CCCAA, there is a paucity of literature on the role athletics plays in the college experience at the community college level or the student choice decision at the community college level (Hagedorn & Horton, 2009; Kissinger & Miller, 2009). This scarcity of literature on student athlete choice

and satisfaction in the community college sector disadvantages institutions seeking to use athletics as a growth tool, as they need a clear understanding of how to prioritize their resources to implement such a strategy, particularly if human capital, facilities, and win/loss record are the primary factors influencing student athlete college choice. Furthermore, even institutions using athletics simply to enhance student life or to alter the image of the institution should understand the enrollment and satisfaction factors associated with athletics, particularly in times of financial distress and limited resources. The graduating high-school senior is a highly sought commodity for colleges, and increasing or even maintaining athletics at the community college could place these institutions in a competitive battle to draw athletes.

Purpose of the Study

The purpose of this study was to survey community college student-athletes, using Perna's (2006) theoretical framework and building on Hossler's (1987) conceptual model of student-choice to ascertain factors that influence community college student-athletes' choice of college. The survey, based on Perna's model of student choice, a blend of economical and sociological theory, added constructs for influences unique to student-athletes. The second purpose to the study was to investigate the extent to which variables, such as race, ethnicity, gender, institution type, sport and region, influence college choice of community college student athletes. The third purpose to the study was to determine whether students would reaffirm their choice of college based on intercollegiate athletics regardless of athletics.

Methodological Approach

Grounded in an objectivist epistemology using a postpositivism theoretical perspective, this quantitative, cross-sectional survey study connected Perna's (2006) student choice model as a theoretical framework, predicated upon Hossler's (1987) conceptual model of student choice with St. John, Paulsen, and Starkey (1996)'s model linking choice to satisfaction and persistence.

Research Questions

The following research questions guided this study:

1. What should a survey trying to evaluate college-choice of community college athletes entail?
2. What are the background characteristics of student athletes that participated in this study?
3. What factors were associated with college choice of community college student-athletes?
4. Were there differences, based on background characteristics, including gender, race and ethnicity, and distance from hometown in the factors that influenced community college student-athletes' college choice?
5. Can a student-athlete's willingness to select a community college without the opportunity to play athletics be reliably predicted from the knowledge of the importance of the factors influencing choice?
6. Can a student-athlete's reaffirmation of choice of college be reliably predicted from the knowledge of the importance of the factors influencing choice, distance from

hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (*Q43*), annual parental household income, and finally whether this community college was the student's first or second college choice?

Significance of the Study

This study is important because it sought to identify factors associated with college choice of student athletes at the community college as well as satisfaction with the factors influencing choice. Finally, the researcher attempted to craft a survey for future study to link satisfaction with the affirmation of the decision to attend the community college. As alluded to previously in this chapter and discussed further in Chapter 2, very little research exists regarding the student choice patterns of athletes, particularly community college athletes. In times of economic crisis, such as the decade currently facing community colleges, administrators are hard pressed to make decisions on resource allocation. It is imperative that these administrators understand both the reasons that student athletes attend their institutions as well as remain at their institutions if they are to make wise fiscal decisions relative to athletics.

Limitations

Every attempt was made to include a variety of public community colleges within the sample; however, given the range of athletic associations governing community college athletics, funding of community college athletics, not every association and funding approach may be represented. Furthermore, colleges have different approaches to allowing surveys on campus. The survey modality was self-administered, electronic surveys. Not all colleges

agreed to participate and at all of the colleges, the institution chose to forward a survey link directly to the students, either from an administrator or from a coach that chose to participate. Best efforts were made at ascertaining response rate, utilizing all athletes that might have been contacted. Nevertheless, response rate may be inconclusive since not all athletes may have been actually contacted and invited to participate.

Delimitations

This study attempted to determine what factors influence community college student-athletes' choice of college as well as whether there are differences in choice factors based on gender, race and ethnicity, academic aptitude and athletic aspirations. This study does not purport to identify other areas where student differences may give rise to varying factors of influence. Furthermore, because the study includes only public community college athletes, the results cannot be generalized to either private two-year institutions or any four-year institutions. Finally, an exhaustive or comprehensive model may be necessary to provide a more in-depth study of factors that may influence choice.

Definition of Terms

Several terms were defined for use in this study:

Comprehensive Community College: A community college offering a range of programs to a wide variety of constituents (Dougherty, 2006).

National Association of Intercollegiate Athletics (NAIA): Athletic governing body with members that are predominantly smaller private colleges.

National Collegiate Athletic Association (NCAA): Athletic governing body with members that are predominantly larger colleges.

National Junior College Athletic Association (NJCAA): Athletic governing body with members consisting of community colleges.

Summary

This study attempted to offer practical guidance to community college administrators, athletic directors and coaches as well as to add to the academic research relative to college choice of student athletes at the community college level. This quantitative study can help community colleges, both large and small as well as rural and urban, understand the role that community college athletics plays at their institutions. It will also help institutions that have identified strategic or tactical goals for their athletic programs to gain direction on successful implementation and maintenance.

Chapter 2 provides an in-depth overview of the external environmental challenges impacting the community college athletic programs as well as Perna's (2006) theoretical framework on student choice, previous studies on college choice, particularly student athletes, and then conceptual model of the relationship of college choice factors, satisfaction of choice factors and then reaffirmation of college choice decision. While Perna's model attempts to predict choice and all of the participants in this study have chosen their institution, precluding the opportunity to compare them against those that have not chosen this institution, Perna's model is one of the more exhaustive models of possible factors or sources of influences on student choice. Furthermore, this study asked students to evaluate satisfaction of their important factors and then reaffirm their choice of college, essentially to make their college choice again.

Chapter 3 describes the epistemology and theoretical perspective used in this study as well as the methodology, variables, survey construction, sampling techniques, data analysis procedures, delimitations, limitations, and ethical issues. Chapter 4 gives the survey administration process, data analysis and results. Finally, Chapter 5 discusses the data analysis and results, implications for practitioners as well as researchers, and then potential directions for future research.

Chapter 4 presents the results of an analysis of the quantitative data. Finally, Chapter 5 provides a summary, discusses the findings, and offers recommendations for practice and future research.

CHAPTER 2. LITERATURE REVIEW

Introduction

This chapter reviews the literature providing support for the hypothesized possible factors influencing student athlete college choice as well as the possible connection between actors, satisfaction, and reaffirmation of college choice. Furthermore, the literature provided justification for the research questions, highlighting the rationale for suggested differences between groups and relationship between choice and satisfaction.

The literature review is divided into four different segments. First, an overview of the marketing interactions of the community college with the broader external environment is given with an emphasis on higher education and the importance of differentiation, community colleges and their identity, population trends facing the community colleges, and then athletics at the community college. Next, the various disciplinary views of student choices are discussed as well as previous studies on college choice, including at the community college and then choice of athletes, particularly community college athletes. Third, Perna's (2006) framework is detailed, articulating the various levels and then additional constructs as related to the athlete segment. Fourth, a grounding for the link between satisfaction and choice is reviewed, resulting in operationalizing Perna's model, embedding satisfaction as a secondary level preceding reaffirmation of choice.

Higher Education and Differentiation

Johnson, Jubenville, and Goss (2009), with support from other researchers (Bennett & Ali-Choudhury, 2009; Judson, Gorchels, & Aurand, 2006; Sevier, 1996), argued that colleges are brands, and that they are dissimilar, resulting in institutions needing to identify and

communicate their brands early in students' search process as well as to reiterate their messages during the search process. In an attempt to reach or serve multiple audiences, some institutions have lost sight of identity and brand, endeavoring to offer too many programs or serve too many audiences (Cain, 1999; Sevier). As such, particularly in times of contraction, colleges need to identify the students they can best serve and serve well, focusing the brand image on that population, as long as it is in line with the institution's mission (Sevier, 2000; Yankelovich & Meer, 2006). Among colleges, frequently place and location will be critical pieces to students' final choice (Sevier, 1996). To trump this requires successful differentiation, finding critical offerings to serve desired students in ways that have meaning; those that cannot differentiate end up competing on price, a strategy that can send the wrong message about value (Sevier, 1996).

One of the challenges of conveying the essence of an institution is the intangible nature to the product, or offerings. Higher education institutions need to work to "make the intangible tangible, and find areas of differentiation" (Anctil, 2008, p. 32) and that tangibility for higher education generally comes from one of three areas: academics, amenities and social life, and athletics. While athletics do not necessarily translate to better academics or different academic experience for non-athletes, the public relations associated with athletics can lead to a better perceived academic quality and overall reputation and awareness of the institution (Anctil). Furthermore, a winning program can enhance the tangibility by giving something for people to attach to, providing a brand that connects to the community, and again, providing exposure via television, news, media, etc. (Anctil). Obviously the ability of an athletic program to give this exposure and tangibility depends on many factors such as conference, competition, head coach, etc. (Milne & McDonald, 1999). However, no study

has surfaced indicating that athletics detracts from a brand long-term, even for smaller institutional programs.

Pine and Gilmore (1998) argued that the United States economy has evolved from commodities to product goods to services and finally to experiences. Organizations today, particularly those serving the next two generations, will find that their previous services will simply become commodities as well, absent any attempt to differentiate. “Today we can identify and describe this fourth economic offering because consumers unquestionably desire experiences, and more and more businesses are responding by explicitly designing and promoting them” (Pine & Gilmore, 1998, p. 97) and experiences occur when “a company intentionally uses services as the stage, and goods as props, to engage individual customers in a way that creates a memorable event” (Pine & Gilmore, p. 98). Furthermore, Pine and Gilmore argued that education is no exception and that applying an experiential focus to education requires intentional active engagement, beyond passive participants. This would entail determining what students want with their college education and then intentionally pulling them into the experience (Bennett & Ali-Choudhury, 2009). If the college experience is truly beyond the classroom, then other dimensions to the experience, such as student life, clubs, athletics, international travel, etc. (Sevier, 1996) are areas that can be leveraged for branding. However, these are areas where community colleges have not implemented as successfully. This leads to challenges in branding the community college experience successfully, unless an institution finds ways to make visible the experiential pieces and convey value about its experiential offerings, which can only be done with the support of understanding college choice and how the 21st century student selects a college.

Two final benefits to understanding students' interpretation of brand and image is that brand and image impact students' perceptions of an institution, which can impact their determination of the fit of an institution as well as their likelihood of being satisfied with their choice of college (St. John, Paulsen, & Starkety, 1996). Sevier (2000) argued three college controllable factors influence choice significantly: student's perception of fit with the institution, financial aid, and the "cool" factor, whether attending an institution will be seen as a cool choice. Two of these three, the fit with the institution and the cool factor, tie directly into the areas where colleges can emphasize tangibility and the nature of the experience.

Identity Issues among Community Colleges

Community colleges do not escape the trend of attempting to serve everyone with its offerings and Cain (1999) argued that the community colleges have become the Wal-Mart of higher education through their emphasis on image as a major force, mission on access, unintentional consequence of being something for everyone, emphasis on quality at low prices and convenient hours, desire to provide personal service, and a pragmatic perspective of students who choose to attend as a necessary result to life's happenings. Attributing a lack of true identity, Cain (1999) asserted that to "understand why the community college is still in search of its identity, we must start from the premise that it is, in fact, a unique institution whose overall place in the structure of American education has never been made very clear..." (p. 10). Like Wal-Mart, the community college requires that one look at the underpinnings and reasoning for its development in order to understand it as a system and possibly why it is in the state it is in today.

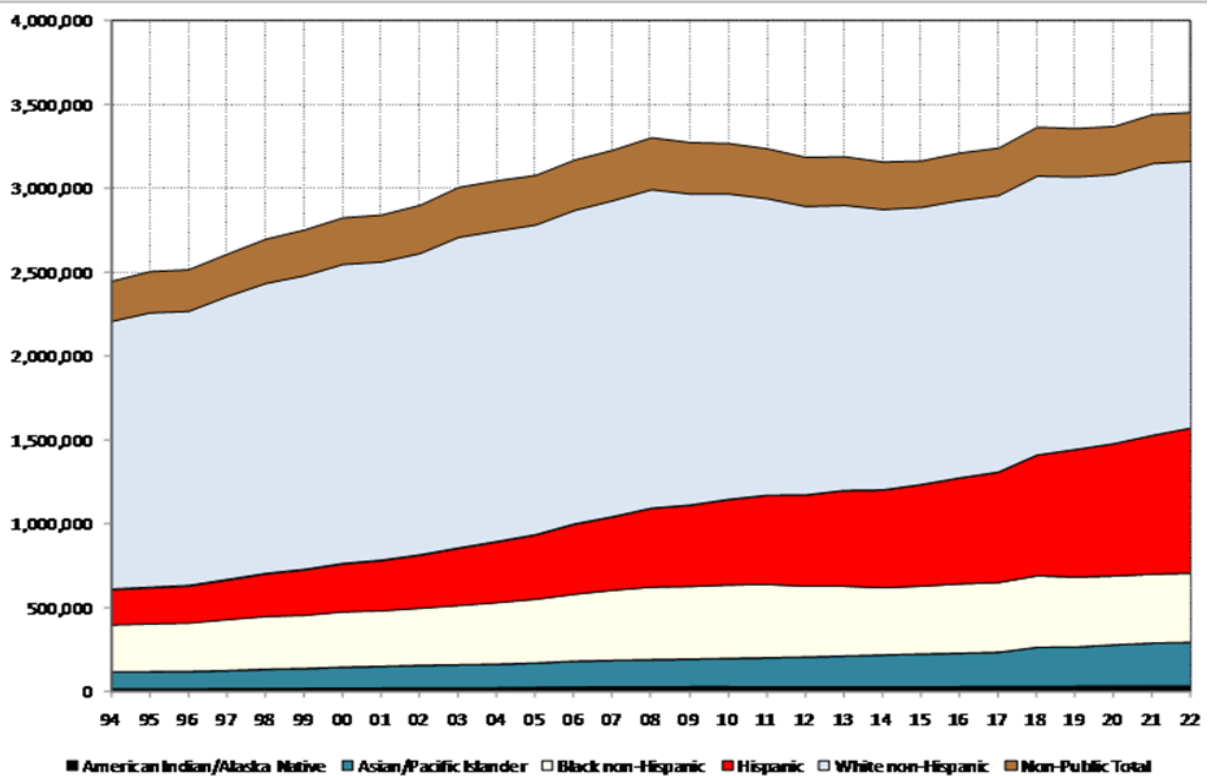
The community colleges have developed through four eras as they move as a system through a lifecycle. No longer at the embryonic stage but neither at the maturity stage, community colleges have moved into the fourth era, that of the comprehensive community college, where colleges have seen drifts, seeing their solid core identity waiver, and attempting to diversify to continue to serve multiple audiences as expected by an entity responsible for maintaining itself by serving those in a changing environment. The end result though is a location for many divergent offerings, creating the identify crisis whereby institutions need to identify their core strengths and pare and possibly refocus (Cain, 1999; Sevier, 1996). This means that the next era of community colleges will need to refocus through leadership and vision, and in Cain's mind, through developing an intellectual focus and empowering students.

Sevier (2000) argued that any refocus must come with the support of relevant and critical data and the community colleges would be no exception. While the community college may be responsible for offering credit and non-credit coursework, the data suggests that there is significant growth in the college parallel coursework taken at the community colleges (The Annual Condition of Iowa's Community Colleges, 2009). Furthermore, population trends in particular areas suggest that community colleges will have momentous challenges as they try to instill economic growth in the community while simultaneously maintaining sufficient student enrollment to sustain a long-term viable entity.

Accomplishing these goals will require long-range or strategic planning, "the process of developing and maintaining a strategic fit between the organization and its changing marketing opportunities" (Kotler & Murphy, 1981, p. 471) and an understanding that student choice is a function of the internal environment or offerings of a college as well as the outer

environment, including economic trends, policy, competing institutions, as well as socio-cultural shifts in student preferences.

Figure 2.1 indicates the expected changes in the number and composition of high school graduates in the next twelve years. While the total overall is increasing, the largest change is in the number of graduating Latino students. Research suggests that Latino and Black students are represented disproportionately higher in the community college population (College Choice and Access to College, 2009; Kurlaender, 2006); thus, growth in this segment of the population should increase enrollment at the community colleges.

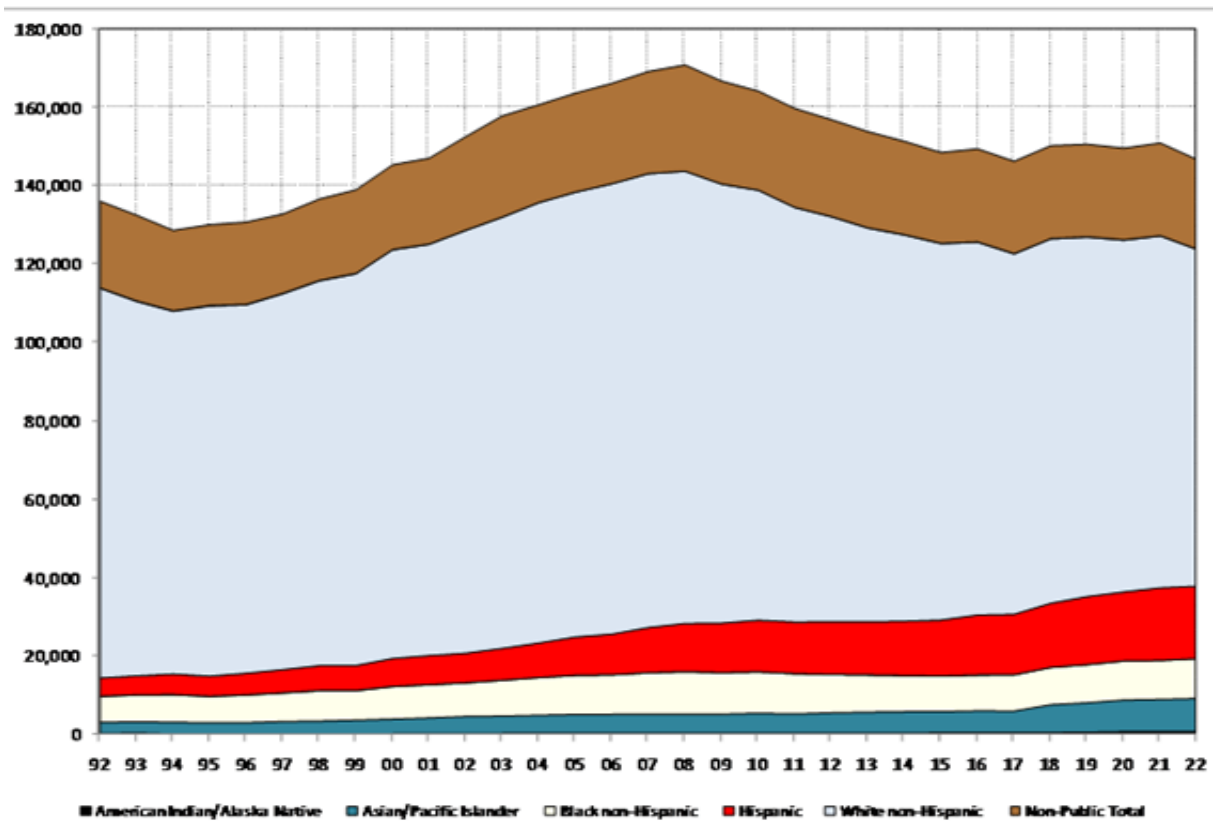


Source: WICHE/The College Board

Figure 2.1. Population trends impacting community colleges, U.S.

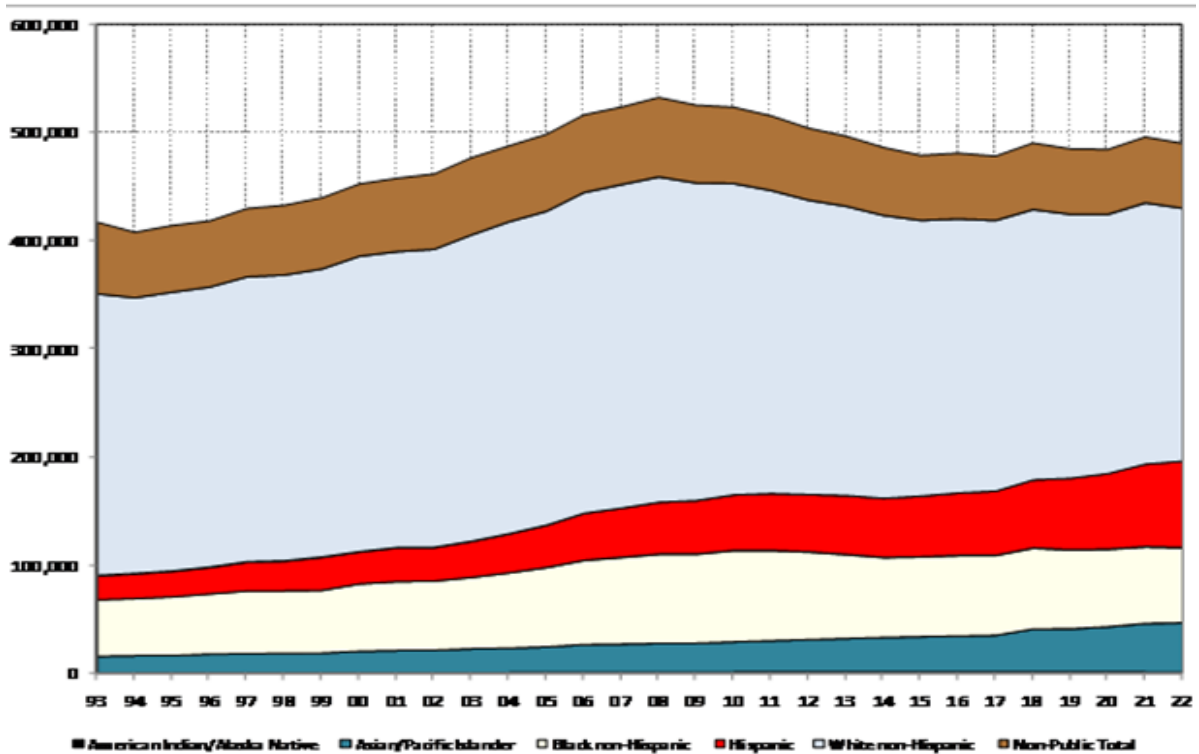
However, the research also suggests that these two minorities come to the community college with lower socioeconomic status as well as lower demonstrated academic aptitude.

Figure 2.2 - 2.4 show the expected trends in the number of and composition of high school graduates over the next 12 years in half of the United States. The number of high school graduates in the New England, Middle States, and Midwest all peaked about 2007 or 2008. Colleges in these regions that traditionally recruit from their home areas will find themselves in a hyper-competitive arena as colleges, including public and private, four-year and two-year, compete for traditional students. While the community colleges do



Source: WICHE/The College Board

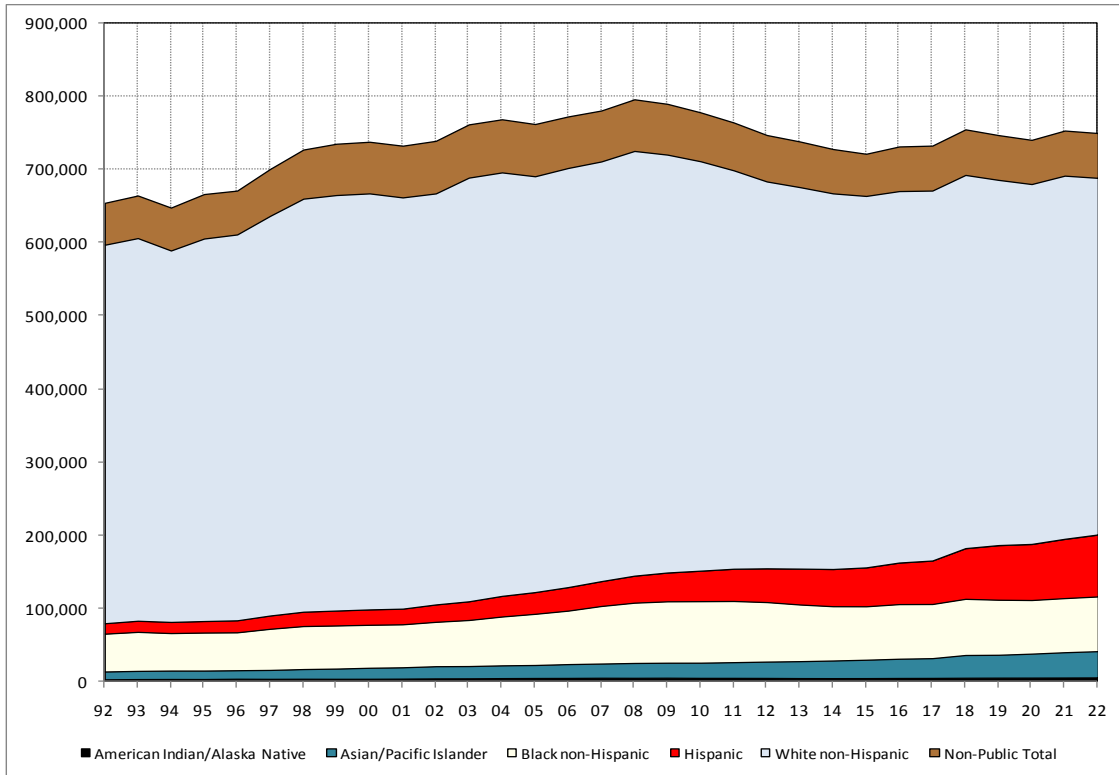
Figure 2.2. Projection of high school graduates, New England (1992-2022)



Source: WICHE/The College Board

Figure 2.3. Projection of high-school graduates, middle states (1993-2022)

not serve simply the traditional high school graduate, the comprehensive community colleges offering liberal arts courses have found these students to be a growing percentage of their headcount; furthermore, these courses generally are more cost effective from an administrative perspective, subsidizing the noncredit and vocational programs (Anctil, 2008). Institutions in these geographic areas, including community colleges, need to understand how and why their students choose their institution if they are going to be successful in competing for students in the next few decades (Johnson, Jubenville, & Goss, 2009).



Source: WICHE/The College Board

Figure 2.4. Projection of high-school graduates, Midwest (1993-2022)

Figure 2.5 illustrates the population changes overall, by county, in the United States from the year 1990 to 2000. Of increasing concern is the number of counties with declining populations overall. While these numbers are almost 10 years old, a quick map of Iowa alone in the past 10 years indicates that the population shifts have continued, much to the loss of particular Midwest communities (Figure 2.6). Community colleges serving areas such as those shown in Figure 2.6, that face declining overall population as well as overall expected declines in high school graduates, must consider the possible need to reach different geographic regions for student recruitment or to consider new and additional programming

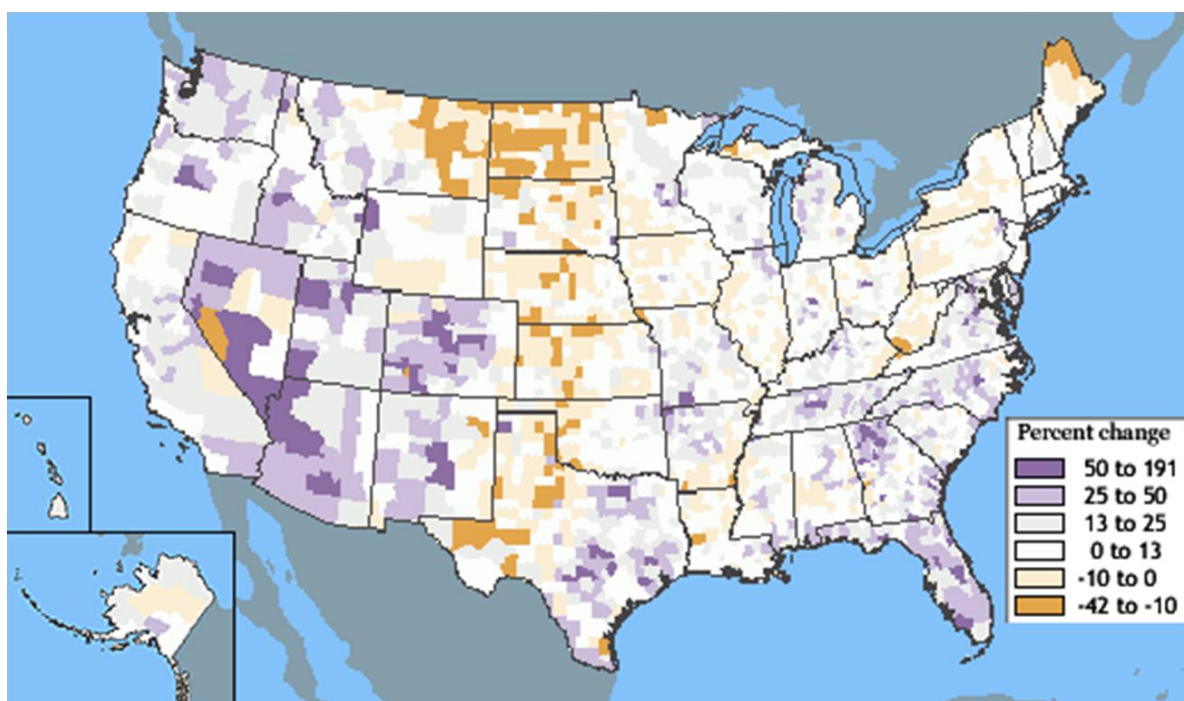


Figure 2.5. Percent population change in the United States, 1990 to 2000

offerings to reach a higher percentage of the geographic market serviced. This latter strategy though requires incorporating additional offerings, a strategy already criticized as stretching the community colleges too thin (Cain, 1999). Reaching outside the current geographic region requires a brand proposition and awareness though for prospective students to see the value of the colleges' offerings, beyond simply price.

Iowa Counties by Percent Change in Population: 2000-2008

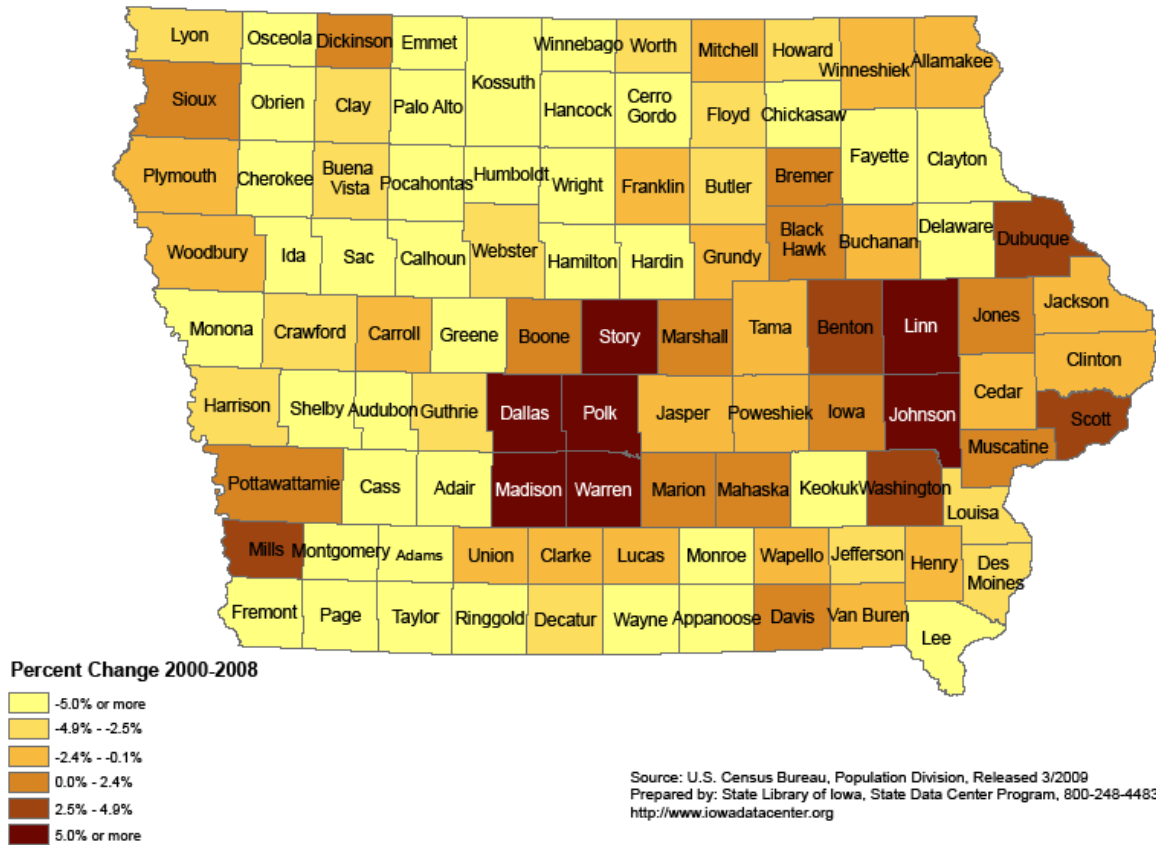
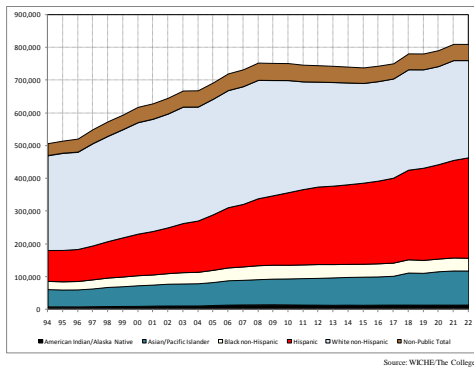
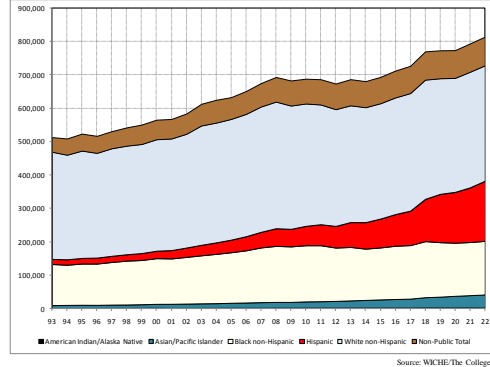


Figure 2.6. Iowa counties by percent change in population, 2000-2008

As shown in Figures 2.7 – 2.9, the Sunbelt areas, the West, South, and Southwest expect the number of high school graduates to increase in the next twelve years and the overall headcount population trends are in their favor as well. But, the composition of the high school graduates is different from 1992 to 2022 in all three of the regions. The Latino high school graduate population is increasing faster than the other segments and again, while this population is disproportionately represented in the community colleges (College Choice and Access to College, 2009; Kurlaender, 2006), this population does have a segment that



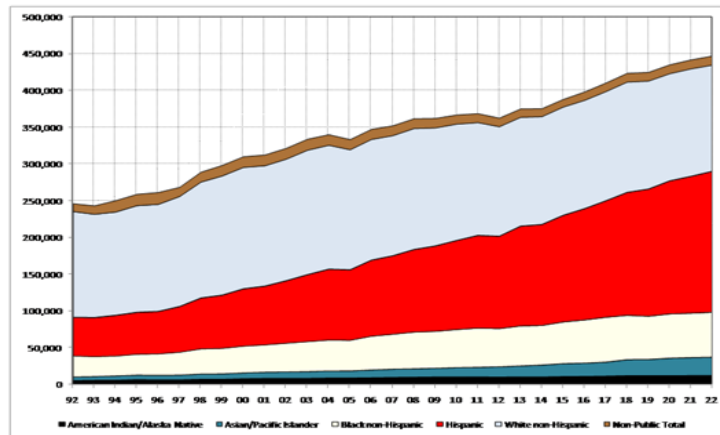
Source: WICHE/The College Board



Source: WICHE/The College Board

Figure 2.7. Number of high school graduates, West, 1992-2002

Figure 2.8. Number of high school graduates, South, 1992-2002



Source 2.7-2.9: WICHE/The College Board

Figure 2.9. Number of high school graduates, Southwest, 1992-2002

has access issues, rendering choice moot. Undocumented residents are constitutionally entitled to the opportunity to K-12 education; however, that entitlement does not continue into postsecondary education, meaning that part of the Latino population is effectively precluded from attending college (Sullivan, 2007). Thus, even community colleges serving

growing areas may find the need to effectively recruit traditional high school graduate students if they wish to increase this segment in their comprehensive community colleges; recruiting successfully means understanding college choice.

Traditional Students and Community Colleges

Even when controlling for the boom of the high school graduates in this decade, the community colleges have seen growth in the number of traditional aged students enrolling (Adelman, 2006). Whether due to the significant increases in tuition at four-year institutions, the economic challenges with the largest recession since the Great Depression, or due to increased acceptability of the community college as a segment of higher education, the community colleges have seen shifts in populations taking credits. Does this give some level of responsibility to offer a student life type program if the community college is more increasingly providing a substantial piece of the four-year college experience.

Role of Athletics in the Community College

First and foremost, successful athletic programs can have a positive effect on an institution. Athletic programs can lead to increased applications and enrollment at an institution (Ashburn, 2007; Chressanthis & Grimes, 1993; Intercollegiate Athletics: Four-Year Colleges' Experiences Adding and Discontinuing Teams, 2001; Lawrence, Mullin, & Horton, 2009; Toma, 1999; Toma & Cross, 1998) have a positive effect with public relations (Beyer & Hannah, 2000; Horton, 2009; Intercollegiate Athletics: Four-Year Colleges' Experiences Adding and Discontinuing Teams, 2001; Toma, 1999), support fundraising and alumni relations (Beyer & Hannah, Stinson, & Howard, 2008; Toma, 1999), and overall increase the brand image or awareness of an institution (Beyer & Hannah, 2000; Chressanthis

& Grimes, 1993; Intercollegiate Athletics: Four-Year Colleges' Experiences Adding and Discontinuing Teams, 2001; Roy & Graeff, 2008; Sevier, 1996). These positive results are not unique to the four-year colleges.

While athletics should tie to the mission of the institution and the mission for the community college may be to serve its district, athletics can support this mission even if students come from out of district (Lawrence et al., 2009; Williams & Pennington, 2006). First, they increase enrollment and spending in the community; but, more importantly, they can alter the nature of the campus community and student life perspective, changing it for other students enrolled on the campus. There are colleges, particularly in times of financial constraints, which attempt to drop programs due to financial distress; but, it appears that community college presidents do not necessarily understand the full economic impact of an athletic program, even ones generating small attendance (Lawrence et al., 2009) nor necessarily how to even begin an athletic program (Williams, 2008). This can result in athletic programs being labeled erroneously as a financial loss and unnecessary (Goff, 2000; Goss, Jubenville, & Orejan, 2006).

While Hagedorn and Horton (2009) asserted that community college sports benefits are dwarfed in comparison to those of the larger state four-year institutions, offering fewer direct revenues streams than other schools, community colleges can still reap benefits. In 2002-2003, rural community colleges accounted for only 39% of full-time, degree seeking students, but accounted for 47% of all community college athletes and made a larger investment in athletics through higher coaching salaries, level of competition, scholarships offered, etc. (Bush, Castaneda, Hardy, & Katsinas, 2009; Castaneda, Katsinas, & Hardy, 2005). Hagedorn and Horton (2009) may argue that community colleges are not intended to

serve the recent high school graduate and athletics may face challenges with traditional enrollment patterns of community college students, but Castaneda, Katsinas, and Hardy (2005) offered that one of the reasons rural colleges emphasize athletics “may include the drive for or maintenance of enrollment growth, which in turn benefits the college through increased efficiency and economies of scale in housing, food service and student activities” (p. 2). Contradicting Hagedorn, Horton, and Berson (1996) found that the female athletes interviewed were actually more likely to enroll full-time and persist academically, in order to remain eligible for athletics, in contradiction to the traditional enrollment patterns of community college students.

Despite the perception that athletes are a special population recruited on community college campuses to the exclusion of others, they are not the only segment to receive scholarship dollars to draw student enrollment (Baum & Lapovsky, 2006). Public two-year institutions had their 1994-1995 discount rate of 6.8% increase to 12.5% in 2003-2004. Institutions use non-need financial aid or discounting strategically to attract particular students to alter the composition of a campus’ student population. Two large categories of non-need financial aid are athletic grants and then tuition waivers, predominantly for employee family members. However, in 2003-2004, athletic grants were only 10% of all two-year college institutional aid, and only 15% of non-need based aid. Nearly two thirds (63%) of all public community college non-need based aid went to students for reasons other than tuition waivers and athletic aid. While non-need based aid has decreased over the last few years, two-year public institutions still distribute substantial dollars for non-need based aid and for reasons other than athletics and tuition waivers, presumably in attempts to draw particular segments of students.

Thus, while athletics at the community college may serve as an enrollment strategy, student life offering, or as a public relations or brand awareness tool, athletics can fit with the community college mission. In the words of Horton (2009), community colleges serve multiple purposes, including acting

...as a viable entryway for students to enter and explore higher education; ...[offering and] open door policy, low cost, flexible class scheduling, and close proximity to the “community” they serve [to] increase the participation rate for many underserved and nontraditional students; and ... they foster further opportunities through sponsorship of athletics for student involvement, community enhancement, and an enriched college experience. (p. 18)

The financial benefits may not be as those of the NCAA Division I teams, but neither are the costs which can be convoluted at the four-year institutions (Goff, 2000). With the increase in the number of community college students seeking to transfer to the four-year institutions, community college athletics arguably are necessary to a statewide higher education system, providing a platform for students seeking to transfer to engage in intercollegiate athletic competition. For any and all of these reasons, it is time that higher education understand how and why the various sectors of intercollegiate athletics choose their colleges, including those engaging in intercollegiate athletics at the community colleges.

Studies on College Choice

Significant research has been conducted on college choice from a variety of perspectives. Nevertheless, the previous studies reviewed for this dissertation research have been grouped into four categories for purposes of this proposal: previous studies on college choice in general, previous studies on community college student choice, previous studies on

college choice of student-athletes, and previous studies on college choice of community college student-athletes.

College choice

As previously mentioned, many of the studies on college choice have been conducted on four-year campuses. Various studies addressing non-athletes and choice revealed a variety of factors influencing student choice, including academic aspirations (Dawes & Brown, 2002; Hossler & Stage, 1992; Hossler, Schmit & Wesper, 1999; Hu & Hossler, 2000), institutional reputation and academic programs (Chapman, 1979; Hossler et al., 1999; Martin, 1991; Murphy, 1982; Noel-Levitz, 2007; Welki, 1987), income (DesJardins, Ahlburg, & McCall, 2006; Martin), socioeconomic status (Dawes & Brown, 2002; Hu & Hossler; McDonough, 1997), parental support or opinion (Hemsley-Brown, 1999; Hossler & Stage; Hossler et al., 1999; Martin, 1991; Murpy, 1982; Welki, 1987), financial aid (Chapman, 1979; Hossler et al., 1999; Noel-Levitz, 2007; Sevier, 2000; Welki, 1987), high school resources (Hossler & Stage, 1992; McDonough, 1997), peers (Hemsley-Brown, 1999; Martin, 1991), location of school (Martin, 1991; Murphy, 1982; Welki, 1987), gender (Hossler & Stage, 1992), distance from home (Dawes & Brown, 2002, Hossler et al., 1999; Murphy, 1982), race and/or ethnicity (Dawes & Brown, 2002, 2004; Hamrick & Stage, xxxx; Hu & Hossler, xxxx; McDonough, 1997), age of student (Dawes & Brown, 2002, 2004), perceived social life (Anctil, 2008; Capraro, Patrick, & Wilson, 2004; Martin, 1991), fit with the college (College Choice and Access to College, 2009; Kellaris & Kellaris, 1988; Sevier, 2000), costs (Martin, 1991; Murphy, 1982; Noel-Levitz, 2007; Welki, 1987), quality of

sports programs (Anctil, 2008; Chressanthis & Grimes, 1993; Reid, Toncar, Jiang, & Anderson, 2008; Toma & Cross, 1998).

Obviously, there are a significant number of factors that have been associated with the various stages of student choice, leading to criticism about student choice models not having explanatory power. However, many of these studies were institutional studies or focused on a limited number of variables, possibly resulting in omitted error bias. The attraction of Perna's model (2006) to be discussed later is that it was an attempt at a comprehensive choice model embedding constructs for many of the variables or factors discussed previously. Nevertheless, a comprehensive model will reveal that different variables may carry different weights for different segments, opening it up to further criticism (College Choice and Access to College, 2009). However, segmentation, by definition, argues that different segments of a population embrace decisions differently. Rather than criticize different choice processes, colleges need to understand them and tailor their enrollment strategies accordingly.

Community college students

There is a paucity of studies have been conducted on the choice patterns of community college students. While some articles describe student populations attending the community colleges as well as student persistence at the community colleges, very few studies exist on why students choose to attend the community colleges (Barnes-Teamer, 2006; College Choice and Access to College, 2009). Smith and Bers (1989) studied the influence of parents of community college students regarding their perspective of their child's choice of college and only 6% said that their child always intended to go to the

community college. The rest of the students decided to attend the community college later in the search process and their parents then said they expected them to attend the community college for only a year or less. For parents, the location of the college as well as the cost and convenience was critical to the choice. Parents said it worked well for their kids to attend school at the community college and then work as well.

Townsend (2003) studied the choice factors for baccalaureate-degree holders choosing to attend the community college after they had already earned a bachelor's degree. Most were adults and the students selected their schools based upon field of study, academic reputation of the program, and then the convenience of the course schedule. Interestingly, in contradiction to the adults in a study by Smith and Bers (1989), these adults said that, despite their satisfaction, they generally would not recommend students who were entering college for the first time to start at the two-year colleges.

A study by Sommer et al. (2006) concluded that the typical community college student attends for one of six reasons: to prove he or she could do it, life happened and the student either did not attend college as a traditional student or did not perform well the first time around, the student had educational aspirations for a career change, new training, or to transfer to a four-year college, families and friends supported them or gave poor role modeling that the student sought to escape, price and location of the institution worked for the student's situation, or finally, this college as an institutions is what the student is seeking. While with some salient findings, such as the significance of the tuition to the students and choice, this study did have several limitations. The study narrowed findings on 223 students participating in focus groups. While the goal was to find a sufficient number to represent the average student, Somers et al. limited their ability to apply their findings to particular subsets

of students attending the community college. That is, while every group of scores has a mean or average, not one single participant may actually have achieved the mean. Thus, findings of the study by Somers et al. may give direction, but do not necessarily apply to student athletes.

A few studies attempted to isolate the choice factors for particular segments of community college students (Kurlander, 2006; O'Connor, 2009; Townsend, 2003). Minorities represent a disproportionately higher percentage of the student population at the community college level compared to the four-year institutions, particularly private or flagship institutions. One study found that Black students attending the community college had a lower average socioeconomic status compared to White students, and Hispanic students' socioeconomic status was even lower than both Black and White students at the community college (Kurlander, 2006; O'Connor, 2009). Furthermore, while in general, regardless of race, students of lower economic socio class are more likely to enroll at the community college, even controlling for socioeconomic status, Hispanic students are still more likely to enroll at the community college (Kurlander, 2006).

Finally, in a study of why students attend the community college, Louisiana Technical College revealed many similar factors to the college choice decisions of four-year institutions, including external influences, college characteristics, socioeconomic status, etc. (Barnes-Teamer, 2005). However, in the final choice stage, location and price became critical influences for its students, similar to the parents studied by Smith and Bers (1989).

Despite these studies in segments of the community college population, there is very little literature about why traditional age students attend the community college (beyond cost), what their expectations are, etc. Furthermore, there is a paucity of literature on why

particular segments of students would choose to attend the community college related to student life variables. Thus, there is little to document that community college students do or do not consider student life or out the classroom activities as factors influencing their college choice.

Student-athletes

A fairly significant amount of research has occurred on the college choice process of student-athletes, the majority of which has centered on four-year institutions through single institution or limited institutions studies (Fountain, 2009; Garbert, Hale & Montalvo, 1999; Goss, Jubenville, & Orejan, 2006; Judson, James, & Aurand, 2004; Klenosky, Templin, & Troutman, 2001; Letawsky, Schneider, Pedersen, & Palmer, 2003; Mathes & Gurney, 1985). Only a handful of studies have attempted to look at college choice of student-athletes at either a national level or with a broad enough sample to represent a variety of perspectives with student-athletes (Doyle & Gaeth, 1990; Dumond, Lynch, & Platania, 2008; Harber, 2009; Johnson, Jubenville, & Goss, 2009; Konnert & Giese, 1987; Le Crom, 2009). College choice factors for student-athletes at the four-year institutions can vary based on revenue vs. nonrevenue sports (Garbert et al., 1999; Goss et al., 2006; Johnson et al., 2009; Konnert & Geise, 1987; Mathes & Gurney, 1985), gender of athlete (Doyle & Gaeth, 1990; Garbert et al., 1999; Goss et al., 2006; Johnson et al., 2009; Judson et al., 2004; LeCrom, 2009; Mathes & Gurney, 1985), race or ethnicity of student athlete (Harber, 2009; Johnson et al., 2009), level of scholarship (Garbert et al., 1999), and level of athletic association (Garbert et al., 1999). Most of these studies however, limited the number of independent variables used in the methodology; that is very few attempted to study student-athletes from a variety of

demographic characteristics or controlling for particular variables to predict choice. Furthermore, many were completed as studies of convenience using home institutions or simply a few institutions within a geographic area.

Community college student-athletes and role

As of spring 2010, only one study has surfaced that is somewhat related to college choice of community college student-athletes. Berson (1996) studied the experiences of female community college athletes in a qualitative ethnographic study. While learning the experiences of these students as student athletes, Berson revealed the push that athletics gave the students to maintain full-time enrollment, progress, and perform academically. Unfortunately, this study tied into satisfaction, with limited application to choice. In fact, it has been the lack of studies on community college choice of students, and particularly student-athletes at the community college, that has led to the need for research in this area (College Choice and Access to College, 2009) in order to determine if the research completed at four-year institutions has application to the community college student-athlete population.

Gender

Gender can be a significant factor impacting influences on college choice, including student-athletes (Doyle & Gaeth, 1990; Fountain, 2009; Goss et al., 2006; Johnson et al., 2009; Judson et al., 2004), but Garbert et al. (1999) did not find significant differences in college choice factors of female and male student-athletes. Among the differences in findings, men generally had athletic factors more prevalently or higher in their rankings compared to women wherein academic factors appeared more frequently along with the

athletic factors (Doyle & Gaeth, 1990; Johnson et al., 2009). Furthermore, in a female only study, Fountain (2009) revealed that student choice for athletes stemmed partly from location of the college and the fun and adventure that could come from the Florida institution. As a qualitative study, this study could not isolate the level of influence that stemmed from the location of the college, the gender of the participants, or the sport played. However, the observation of location related to fun in college surfaced only in this qualitative study of female athletes, leading to the question of whether it is in at least part due to gender.

Given the differences generally found in college choice based on gender, it seems prudent to argue that there are differences in college choice patterns of male and female student-athletes at the community college. No study has been uncovered at this time that has attempted to highlight any differences at the community college level with student athletes. However, it seems sensible to ask whether there are differences, based on gender, in the factors that influence community college student-athletes' college choice.

Race and ethnicity

As previously mentioned, minorities represent a disproportionately higher percentage of the student population at the community colleges. Furthermore, Black and Latino students at the community college are more likely to be from lower socioeconomic status (Kurlaender, 2006; O'Connor, 2009). Harber (2009) found that there are different athletic goals of Black athletes compared to White athletes, with Black athletes in revenue-generating sports more likely to aspire for professional sports; however, despite their athletic aspirations, Black students did not transfer as frequently from the community college to a four-year institution, even though they had the same academic aspirations at the predisposition stage of the choice

process (Harber, 2009; Pitre, 2006). Judson et al. (2004, 2009) did not reveal differing results regarding race and ethnicity in their studies on college choice and student athletes. They revealed that race and ethnicity were generally not factors impacting choice except for “other ethnicity,” beyond Black and Latino, whereas the opportunity actually to play was a significant factor in their college choice. While there is a paucity literature on difference factors influencing student-athletes’ college choice, there is sufficient literature on race and ethnicity as a factor impacting college choice (Dawes & Brown, 2002, 2004; Hamrick & Stage, 2004; Hossler et al., 1999; Hossler & Stage, 1992; McDonough, 1997; Paulsen, 1990; Pitre, 2006), particularly at the community college (Kelp Kern, 2000) to warrant the question of whether there are differences, based on race and ethnicity, in the factors that influence community college student-athletes’ college choice.

Type of sport

Literature exists suggesting that the type of sport influences choice factors for student-athletes (Johnson, Jubenville, & Goss, 2009). Grouping sports by general fan attendance, revenue generating sports, traditionally football and then men’s and women’s basketball, recruit athletes for different reasons than non-revenue generating sports. Athletes participating in revenue generating sports at the four-year institutions generally ranked athletic factors more frequently than non-athletic factors when asked about factors influencing their college choice (Johnson et al., 2009; Garbert et al., 1999; Goss et al., 2006; Mathes & Gurney, 1985). Interestingly, while Mathes and Gurney (1985) found men in revenue generating sports placed higher values to athletic factors than men in non-revenue

generating sports, they also found that men in revenue generating sport ranked academics higher than men in non-revenue generating sports.

Few of these studies have controlled for division or conference, making it challenging to determine whether the differences between revenue and non-revenue generating sports would apply to all conferences or levels of competition. However, given the different fan patronage of revenue generating sports in general and the resulting elevation of those athletes in the public scrutiny, it seems prudent to consider type of sport when looking at student athlete college choice. Thus, the current study includes the research question of whether there are differences, based on type of sport, in the factors that influence community college student-athletes' college choice.

Institutional classification and region

Much of the literature on student-athlete choice focused on the four-institutions where different levels of competition resulted in different factors influencing college choice at times. Johnson and others (2009) found that athletes at NAIA institutions prioritized opportunity to play and head coach when choosing a college, whereas Konnert and Giese (1987) revealed that athletes identified academic programs, financial aid opportunities and general reputation in student-athletes' top factors at the NCAA Division III institutions studied. Goss and others (2006) also found more of a balance between academic factors and athletic factors with NAIA and NCAA Division III student-athletes.

Garbert et al. (1999) completed one of the few studies incorporating more than one type of institution and found that NCAA Division I student-athletes weighed athletic factors more than social and academic factors, but academic support services and degree programs

did matter. They found that NCAA Division II and NAIA institutions' student-athletes placed a greater emphasis on college environmental factors than NCAA Division I, mimicking the primary college choice factors of cost, location, social climate and academic programs, similar to non-athletes.

Others have confirmed the heightened emphasis of athletic factors as well as academic reputation and location of college on NCAA Division I student-athletes (Dumond, Lynch, & Platania, 2008; Klenosky et al., 2001; Judson et al., 2004; Letawsky et al., 2003) and Fountain (2009) confirmed the emphasis of location and scholarship over coach and academics for NCAA Division II student-athletes. Nevertheless, despite the emphasis on athletic factors, Doyle and Gaeth (1990) revealed that amount of scholarship, particularly for those with financial need, was the top influence of the NCAA Division I athletes in their study.

Different levels of competition presumably have some relationship to institutional classification as NCAA Division III and NAIA institutions generally are smaller in size or scope of programs compared to NCAA Division I and II institutions. Furthermore, given that athletic associations are not nationwide at the community college level, it is possible that region of the country also ties into institution type. Thus, it is plausible that different classifications of community colleges also result in different levels of competition, resulting in different choice factors. For example, the rural community colleges' athletic rosters include a higher proportion of athletes than the other community colleges, and invest a larger amount of resources in athletics than other community college classifications (Castaneda, Katsinas, & Hardy, 2005). It is possible that their student-athletes are influenced by different factors than student-athletes at community colleges with a lower investment in athletics,

henceforth the need to understand whether there are differences, based on institution classification or region, in the factors that influence community college student-athletes' college choice.

Conceptual Models

Multiple conceptual models exist regarding student choice of colleges. As a depiction of the decision-making stages a student traverses as he or she selects a college, the conceptual model is a bottom layer on which theoretical frameworks are applied to explain college choice. Bateman and Spruill (1996) reminded researchers that, while students may go through stages, they do not necessarily mature; that is, progressing from a stage to the next does not imply growth in decision-making processes, but simply progression through a process. Table 2.1 provides a summary of three leading models on student choice.

Table 2.1. Summary of three leading models on student choice

Phase	Litten (1982)	Jackson (1982)	Hossler (1987)
1	Desire to attend developed	Attitude or Interest in going to college developed	Predisposition to college
2	Investigation of potential institutions of higher education	Exclusion – forming choice set where students identify institutions to explore	Search stage
3	Applications, actual admission, and enrollment	Evaluation – students review institutions in second phase and select	Choice stage

A model for student choice developed by Hossler and Gallagher (1987) entails three stages and evolved from a series of earlier models. Chapman (1984) proffered five stages to the college search phase: (1) “pre-stage” where students determine whether they will attend college in general: (2) search stage where students solicit information about colleges and then

select an institution; (3) application stage; (4) choice stage; (5) enrollment stage. Chapman's model is not discussed further as it is too simplistic in some stages and too long in others.

Litten (1982) posited that students go through three phases as they search for college: (1) desire to attend; (2) investigate potential institutions of higher education; (3) apply, receive admission to institutions and, finally, select and enroll in one institution. Jackson (1982) also postulated a three-stage model: (1) students develop an attitude or interest in going to college; (2) exclusion state where the students form a choice set wherein they identify institutions they want to learn more about; and (3) evaluation stage wherein students evaluate the institutions selected in the second stage and make a choice.

Sevier (2000) developed a three-stage model: (1) initial examination of institutions; (2) seek additional information and take the lead in the narrowing of colleges; and (3) apply to groups of colleges and then select one. Hossler's (1987) model uses three stages that refined models by Litten (1982) and Jackson (1982) into one. Sevier's (200) model is not a replication of Hossler's (1982) earlier model as Sevier did not include a predisposition stage, or phase where students make a choice to consider going to college. This may be due to the fact that Sevier's model (2002) was developed more recently, at a time where many students simply have the predisposition to attend college.

However, given the number of segments of students not attending, it seems important to continue with a stage dedicated to developing the aspiration to attend college. Thus, Hossler's (1987) conceptual model, interpreted as follows and replicated in Table 2.1, was used in the current study, as it continues with the aspiration or predisposition stage and because of its simplicity. The model has also been validated and replicated many times.

Hossler's model for student choice is the conceptual model used in many studies on student

choice (College Choice and Access to College, 2009; DesJardins, Ahlburg, & McCall, 2006; Garbert et. al., 1999; Paulsen, 1990; Perna, 2006; Pitre, 2006; Smith & Bers, 1989; Toma & Cross, 1998; Townsend, 2003).

As mentioned previously, Hossler's model articulates three discrete stages in which students select a college; furthermore, Hossler intentionally named the stages, providing descriptive labels that peer researchers can use to concisely articulate which stage is being studied (1987). Hossler's first stage, the predisposition phase, "is a developmental phase in which students determine whether or not they would like to continue their education beyond high school" (Hossler & Gallagher, 1987, p. 209). The search phase is when students search out the institutions and formulate their choice set which is defined as "the group of institutions to which students will actually apply" (p. 209). Finally, the third phase, the choice stage, is the phase in which students decide which college to actually attend.

Shocker (1991) further developed Hossler's conceptual model, providing additional language to the phases from a marketing perspective. Most product purchases include a predisposition to the product; however, the second stage entails much more than just a search set. Consumers, which include students seeking higher education, have three sets that narrow through the search stage and then into the choice set. The first piece to the search stage is the universal set, which is the "totality of all alternatives that could be obtained or purchased by any consumer under any circumstance" (Shocker, Ben-Akiva, Boccara, & Nedungadi, 1991, p. 182). Thus, for student choice, this would encompass all possible avenues for higher education to a student. The second set is the awareness set, which "consists of the subset of items in the universal set of which, for whatever reason, a given consumer is "aware"" (p. 182). This set includes the evoked, inept, and the inert. The "evoked are acceptable to the

consumer, the inept set consists of brands that are unacceptable, while the inert set consists of brands for which the consumer holds neutral views” (Dawes & Brown, 2002, p. 51). For students seeking higher education, the universal set would include all colleges possible to a student, regardless of whether a student is aware of the institutions or not; the awareness set includes only those institutions of which the student is aware, regardless of whether the student has rejected the institution (inept set), the student has affirmed the institution as a good institution to consider (the evoked set), or whether the student is indifferent or undecided about the institution (the inert set) (Shocker et al., 1991). Finally, the search stage results in the consideration set, which is “purposefully constructed and can be viewed as consisting of those goal-satisfying alternatives salient or accessible on a particular occasion” (p. 183). This is the set, which includes the evoked and possibly inert sets whereby students have investigated and found them to be institutions that would satisfy their decision criteria. Shocker et al. ends with the choice set, which is the “final consideration set, i.e., the set of alternatives considered immediately prior to choice” (p. 183). It is this set from which Hossler’s final stage—choice—is made.

Figure 2.10 illustrates Shocker’s enhancements to Hossler’s search and choice stages by articulating further the pieces comprising the search stage. From this, the search stage frequently results in the label of consideration stage. From an institution’s perspective, it must be in the student’s final consideration stage to be considered for the choice set or enrollment. However, by looking at the various sets involved in the search stage, an institution can see that, if it lies in the universal set but absent from the awareness set, it will not be considered whatsoever as a student has not even had a chance to accept or reject the

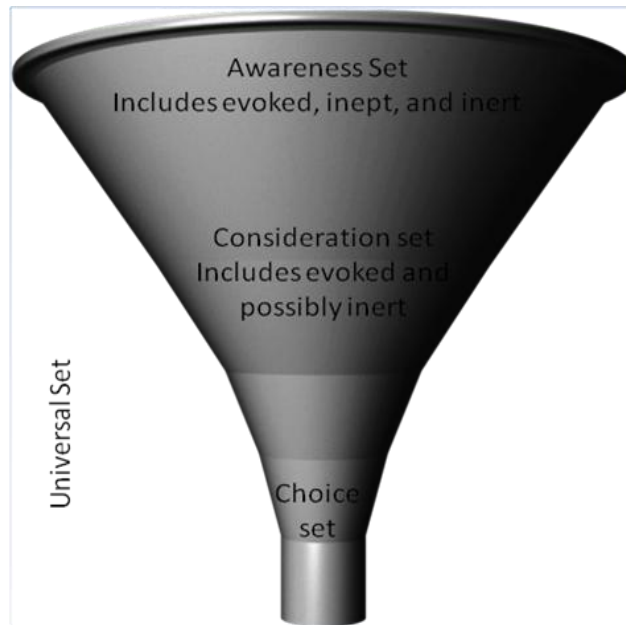


Figure 2.10. Various sets related to student choice

institution. Colleges seeking to reach out beyond the traditional area where students are unaware of them must find a way to have their brand, image, or even just their name exposed in newer regions, a task that can be accomplished in many ways, including with the use of athletics (Clark, Apostolopoulou, Brandvold, & Synkowka, 2009; Lee, Miloch, Kraft, & Tatum, 2008; Sevier, 1996).

The current research used Hossler's conceptual model to study the choice stage. However, it is with the understanding that the choice stage is a narrowing and selection of the consideration set which is the end product of the search stage as described by Shocker. The search stage includes the process of investigating, possibly visiting, and conversing with institutions. The choice set is the result of those actions and narrows down the consideration set into those few institutions seriously under consideration at the time a student selects an institutions. At the time of Hossler's model, researchers would say the choice stage ends

with enrollment; however, it is possible that students may enroll in more than one institution, particularly given the trend to push new student enrollment and orientation earlier in the year. Thus, for the 21st century, it is possible that the choice set actually ends with the beginning of attendance at a school, although for athletes, this decision may still occur earlier with the process of “signing” with an institution.

Theoretical Framework

“Theory is an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables. ... A theory might appear in a research study as an argument, a discussion, or a rationale, and it helps to explain (or predict) phenomena that occur in the world” (Creswell, 2009, p. 51). Student choice is generally explained from one of four micro-level theories: economic, sociological, psychology, or some combination of the aforementioned academic disciplines. Furthermore, different researchers emphasize the importance of the different theories at different stages of the choice process.

Economic theory

Economists see college choice as part of a rational, investment decision, comparing expected costs to expected benefits (Hossler, Schmit, & Wesper, 1999; Paulsen, 1990)

Economic theory “posits that students will calculate the expected costs and benefits from each institution under consideration and then choose to enroll in the institution with the highest utility of net expected benefits” (DesJardins & Toutkoushian, 2005, p. 193).

Economic theory frequently is associated with financial aid or other questions relative to financial aid.

Economic theory intersects with consumer behavior, which is the process by which consumers make decision about goods and services. Marketing embeds utility into consumer behavior by arguing that consumers rationally evaluate their options, based on utility (price, time, form, and place) and that the evaluations are rational after utility is assigned and individual's preferences are considered with their budgetary constraints.

Accordingly, the definition holds that if given the choice, the person would attempt to act in a way that would maximize his or her utility subject to the resource or budget constraint. It is very important to note that the consumer is acting in way that would maximize his or her utility, and the utility obtained from education and all other goods is unique to each person. (DesJardins & Toutkoushian, 2005, pp. 213-214)

The key to determining whether an individual is evaluating rationally is by whether or not the individual is acting in a manner that is consistent with his or her preferences. Thus, DesJardins and Toutkoushian posited that students do not have to have the best information to make decisions as long as they act rationally on the information they do have. Economics theories posit that

...students make postsecondary decisions based on the utility that they would receive from different schooling options, and not simply the next financial benefits. While the utility would certainly be influenced by the next expected monetary benefits from attending each institution, it would also take into account the perceived non-pecuniary benefits of each choice and the satisfaction that students receive from these.... (DesJardins & Toutkoushian, 2005, pp. 218-219)

The model does not care how utilities are assigned but, rather, whether they are assigned rationally, based on the information a student has. Thus, a student could rationally choose the community college over an Ivy League school based on a variety of utilities that meet the student's need, given the student's situation, goals in life, etc.

As mentioned previously, economic theory is frequently the theoretical framework for studies looking at financial aid, tuition, and college costs research (DesJardins, Ahlburg, & McCall, 2006) as well as for studies looking at the different stages of college choice, particularly macro-level studies (Perna, 2006). The theory is limited, though, in Perna's view, by its ability to explain choice differences at the micro-level, looking at individual, group, or institutional based theories (2006). Chapman (1981) argued that the pre-stage (Hossler's predisposition stage) is influenced by economic factors whereas Jackson (1982) posited that rational evaluation occurred at the choice stage where costs are a factor and students will develop a rating system at the end when they make their choices. Hossler (1987), presumably, perceived that economic factors do not influence the choice stage significantly as he believes that university actions and public policy are less important in this stage and that sociological factors influence final choice over economic factors.

Sociological theory

Sociological theory generally operates under the assumption that students choose a college as part of their general status attainment process (Paulsen, 1990). Status attainment models add to the choice process by looking at behavioral variables of students (e.g., academic performance), background variables (parental educational status) and then tie these to student aspirations (Vrontis, Thrassou, & Melanthiou, 2007; Perna, 2006). More frequently used, this model emphasizes the role of student abilities as demonstrated, parental socio-economic status, peer influences, caliber of high school, etc. (McDonough, 1997; Paulsen, 1990). Hossler and Gallagher (1987) argued that sociological theory is extremely

important in explaining student choice behavior in the predisposition stage as well as the search and choice stages.

Psychological theory

Not as prevalent in student choice theory, psychological theory looks at an institution and its fit with the student (Paulsen, 1990; Sevier, 1996). Stated differently, psychology theorists “examine college choice from the perspective of the impact of college experiences and environments on students and optimal student-institution fit” (Paulsen, 1990, p. 7; Hemsley-Brown, 1999). This concept of fit is very important as colleges essentially have only two broad enrollment strategies: market penetration or market development whereby the institutions recruits students with characteristics similar to those of the college (Sevier, 2000) or product development or diversification whereby the institutions changes the college’s characteristics so they are akin to the characteristics of the students sought (hence, a good fit) (Kotler & Murphy, 1981; Paulsen, 1990).

Surprisingly, very little research has been conducted, particularly at the choice stage, on the impact of college fit and student choice. Nevertheless, admissions, facilities growth with recreation centers, and recruitment materials emphasize the importance of fit with student choice (Kellaris & Kellaris, 1988). Furthermore, certain institutions pride themselves on having a culture so ingrained in the institution that it naturally seeks students wanting a particular atmosphere for the college experience and fit. Strong religious institutions, women only institutions, historically black institutions, openly liberal institutions, frequently draw students seeking out students and campuses where they see themselves as a fit. However, much of the research on college choice has not focused on the psychological theories; to do

so would emphasize the relationship of an institution to the student (College Choice and Access to College, 2009) or students' inability to truly articulate why they select a college (Hemsley-Brown, 1999). Nevertheless, Bateman & Spruill (1996) argued that the college choice process should possibly contain a fourth phase, or stage—graduation—or at least the choice to return to an institution and continue studies. There are a handful of student choice theorists to suggest a link between choice and retention, and retention experts would be the first to suggest that students that don't find or experience a fit with their institution are less likely to progress (Bateman, 1996; Hossler, et al., 1999; St. John et al., 1996).

Combined theoretical models

Ultimately, many researchers on student choice blend at least economic theory with sociological theory to describe student choice. Offering an opportunity for constructs from each of the disciplines, a combined approach allows different factors from different academic camps to be used in different stages as explanation of choice. Chapman (1981) theorized that internal influences such as socioeconomic status and aptitude, external influences such as friends, parent, and high school personnel, and then fixed college characteristics, such as cost, financial aid, location, availability or program, and then communication efforts by the college all influence student choice, just with different intensity at different stages. Hossler and Gallagher (1987) also suggested that different theories had stronger explanatory power in different stages. Thus, the general consensus is that one theory may have stronger predictive power over isolated independent variables or areas being studied; nevertheless, in general, college choice is a result of a combination of theories.

Perna's theory

Perna (2006) used Hossler's three-stage model as an element to hers, blending all three stages as student choice. Then Perna proposed what she termed:

...a conceptual model for studying student college choice. Recognizing that neither [economic nor sociological] approach is sufficient for understanding differences across groups in student college choice, the proposed conceptual model integrates aspects of economic and sociological approaches. The model assumes that an individual's assessment of the benefits and costs of an investment in college is shaped by the individual's habitus, as well as the school and community context, the higher education context, and the social, economic, and policy context. (Perna, 2006, p. 101)

First, while Perna termed her approach as a new conceptual model, in essence, she argued that three sets of theories drive student choice. Second, her model is the closest to acknowledging that student choice is a function of the individual and immediate surroundings, the organizational habitus or high school resources (McDonough, 1997), the higher education marketing mix and, finally, the broader external environment comprised of socio-cultural trends, demographics, economic factors and policy decisions. As such, this model allows for some modes of segmentation by being sufficiently inclusive of explanatory variables that different variables can carry different weights for different students and groups. While the model is intended to be a comprehensive choice model, the model allows sufficient variables to identify differences in segments, necessary with the different populations attending college in the twenty-first century (College Choice and Access to College, 2009). Furthermore, while Perna articulated that her model is a blend of economic and sociological theory, in essence, she embedded a construct for psychological theory for student fit. Her argument is that the individual habitus includes the individual set of beliefs, attitudes, and thought processes and that the higher education habitus includes the elements that the

institution offers prospective students. By including both pieces, one can attempt to determine whether the student was attracted to the offerings of the higher education institutions, and henceforth, felt a good fit, choosing the college accordingly.

Figure 2 depicts Perna's (2006, p. 117) proposed conceptual model for student choice. The model represents the importance of economic theory with the emphasis on

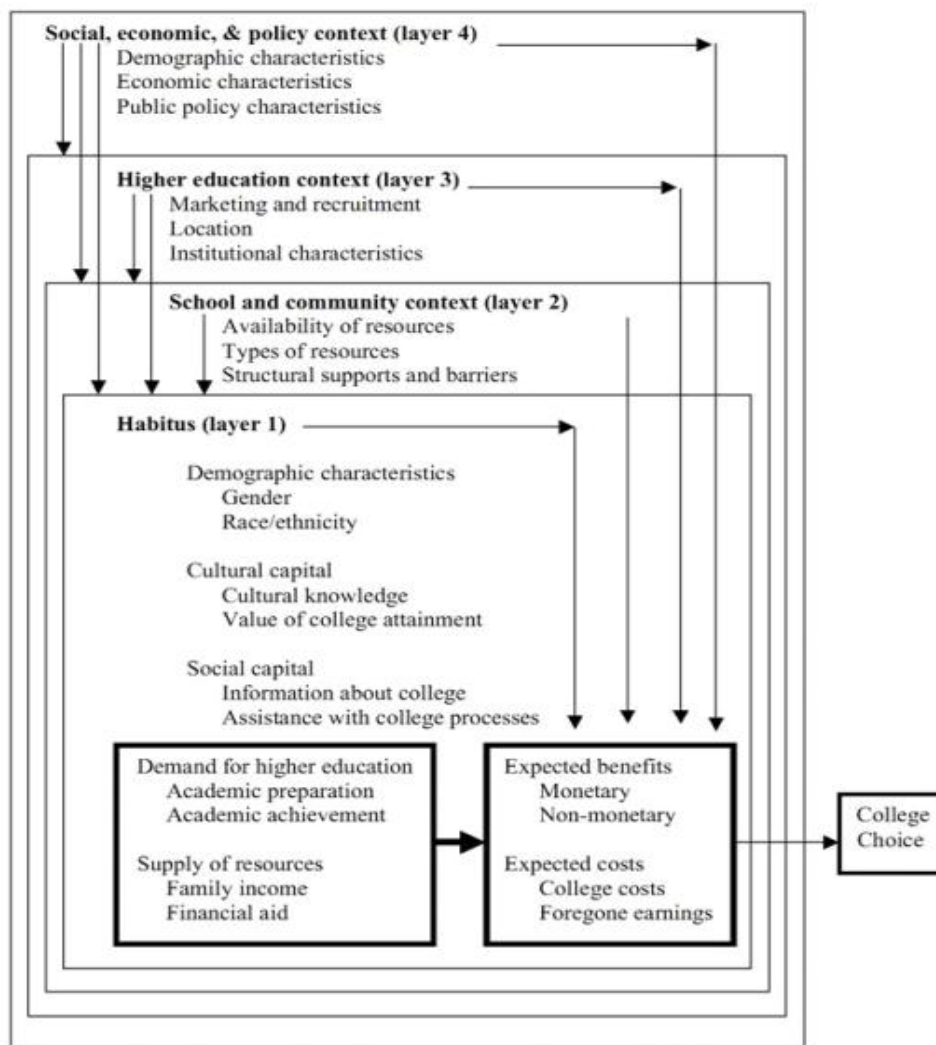


Figure 2.11. Perna's conceptual model for student choice (2006)

overall demand for higher education coupled with supply of resources influencing a student's rational evaluation of expected benefits compared to expected costs when making choosing a college. However, the ultimate decision is couched in the Individual Habitus (layer 1) whereby demographic characteristics, particularly gender and race/ethnicity, cultural capital, including cultural knowledge and value of college attainment, and then social capital, including information about college as well as assistance with college processes all feed into the decision of expected benefits compared to expected costs. Thus, sociological theory influences the ultimate decision as well.

The School and Community context (layer 2), referred to by McDonough (1997) as the Organizational Habitus, impacts the habitus as well as the ultimate college choice decision. This layer includes availability of resources, types of recourses, and structural supports and barriers that influence student choice as well. The third layer, the Higher Education context, acknowledges that marketing and recruitment, location, and institutional characteristics all can influence a student's perception of expected benefits and costs, information about college, resources within the high schools, and ultimately a student's choice about college. Other than research on communication pieces used by potential students as well as research on college choice factors such as academic programs, very little research has focused on the impact of the brand of an institution influencing college choice. This model allows for that construct to be considered. Finally, the fourth layer, the Social, Economic, & Policy context include characteristics influencing higher education as well as student choice from a macro-level. Changes in demographic characteristics, economic characteristics, as well as public policy characteristics can have wide-sweeping consequences on student choice (Perna, 2006).

Additional constructs were added to the model in the current study. Layer 1, the Individual Habitus includes athletic aspirations as a construct. The School and Community context includes the role of the high school coach's influence as well as the influence of fellow teammates. The Higher Education context also includes additional constructs for athletic personnel, athletic traditions, and athletic facilities.

Satisfaction

St. John et al. (1996) hypothesized that satisfaction in a college experience results in institutional commitment, which results in persistence or retention on the part of students. However, rather than keeping with the general trend to separate retention from recruitment, the authors' worked with the adage that it is easier to keep a customer than it is to find a new one; meaning, it is easier to retain an existing student than it is to find a new one. Thus, recruitment and retention should work hand-in-hand, recruiting student with fair expectations of an institution and working to satisfy those expectations and thus resulting in overall satisfaction and institutional commitment.

Applying this concept to this study, St. John et al. (1996) posited that it is important to determine why a student chooses to enroll (factors influencing choice) and then determine whether the student is satisfied in the factors related to the relationship of the student to the institution, with emphasis on the faculty. Students who are satisfied in the important factors centered on choice are more likely to have that institutional commitment and thus reaffirm their choice of college.

Implementing Models on Choice and Satisfaction

The development of the survey instrument, designed to measure constructs from the model on choice (Perna. 2006) as well as the model on satisfaction (St John et al., 1996), is presented and discussed in the following chapter. The survey includes background demographic characteristics and financial considerations representing Layer 1 in Perna's model. Layer 2 is represented by the factors relative to the high school or organizational setting. Layer 3 is represented by various factors associated with colleges, from social setting, to campus climate, to academic programs, etc. This is the layer that an institution controls. The fourth layer is not represented substantially as this study is at the choice set, and many of the factors in the fourth layer influence macro trends in student choice and then some relative to micro trends in earlier stages of the search process (such as the aspiration stage). The survey also embeds constructs for athletics, relative to athletic aspirations, construct added to Layer 1, role of high school coach and teammates, constructs added to Layer 2, and then athletic facilities, tradition, personnel, etc., constructs added to Layer 3.

The second part of the survey seeks to ascertain student satisfaction with the various factors listed previously in the choice section, in an attempt to implement the philosophy of St. John et al. (1996) on student satisfaction. The third part of the survey asks engagement questions as well as these questions are the final piece to the satisfaction model (St. John et al.) as students that are engaged are likely demonstrating satisfaction and this engagement is measured on the athletic side, academic side, and then social side of the college experience.

Summary

Extensive literature exists relative to student choice. However, much of the literature has focused on pieces of the college choice process or focuses on particularly segments. While very little of the research is qualitative in nature, the quantitative research completed prior to the current study has been fairly narrow, leaving the uncertain question of omitted error bias. The current study was designed to use a comprehensive model to give breadth to the possible factors that may influence a particular under-researched segment, the community college student athlete.

CHAPTER 3. METHODOLOGY

Overview

The purpose of this study was to determine the factors influencing choice of college for community college student-athletes as well as their satisfaction with their institutions and athletic experiences. This chapter articulates the approach for the research design, including the following: epistemology and theoretical perspective; research questions and hypotheses; population, sampling frame, and sampling approaches; data collection instruments, including discussion of validity, variables, and data analysis procedures; pilot tests results; and anticipated ethical issues. Finally, the appendices to the chapter include the data collection instruments, Institutional Research Board (IRB) approval, and consent from participating colleges.

Research Questions and Hypotheses

The following research questions guided this study. The first three were addressed using descriptive statistics, whereas research questions 4 – 6 were addressed by hypotheses and analysis using inferential statistics.

1. What should a survey trying to evaluate college-choice of community college athletes entail?
2. What are the background characteristics of student athletes that participated in this study?
3. What factors were associated with college choice of community college student-athletes?

4. Were there differences, based on background characteristics, including gender, race and ethnicity, and distance from hometown in the factors that influenced community college student-athletes' college choice?

H_{01} = There are no differences between male community college student-athletes and female community college student-athletes in the factors influencing their college choice.

H_{a1} = There are differences between male community college student-athletes and female community college student-athletes in the factors influencing their college choice.

H_{02} = There are no differences between minority community college student-athletes and non-minority community college student-athletes in the factors influencing their college choice.

H_{a2} = There are differences between minority community college student-athletes and non-minority community college student-athletes in the factors influencing their college choice.

H_{03} = There are no differences between community college student-athletes with a hometown within 120 miles and community college student-athletes with a hometown beyond 120 miles in the factors influencing their college choice.

H_{a3} = There are differences between community college student-athletes with a hometown within 120 miles and community college student-athletes with a hometown beyond 120 miles in the factors influencing their college choice.

5. Can a student-athlete's willingness to select a community college without the opportunity to play athletics be reliably predicted from the knowledge of the importance of the factors influencing choice?

H_{04} = A student-athlete's willingness to select a community college without the opportunity to play athletics cannot be reliably predicted from the knowledge of the importance of factors influencing choice.

H_{a4} = A student-athlete's willingness to select a community college without the opportunity to play athletics can be reliably predicted from the knowledge of the importance of factors influencing choice.

6. Can a student-athlete's reaffirmation of choice of college be reliably predicted from the knowledge of the importance of the factors influencing choice, distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (*Q43*), annual parental household income, and finally whether this community college was the student's first or second college choice?

H_{05} = A student-athlete's reaffirmation of choice of college cannot be reliably predicted from the knowledge of the importance of actors influencing choice, distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (*Q43*), annual parental household income, and finally whether this community college was the student's first or second college choice?

H_{a5} = A student-athlete's reaffirmation of choice of college can be reliably predicted from the knowledge of the importance of actors influencing choice,

distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (Q43), annual parental household income, and finally whether this community college was the student's first or second college choice?

Epistemology and Theoretical Perspective

This quantitative study incorporated a post-positivism theoretical perspective grounded in an objective epistemology. Researchers with an objectivist epistemology discover meaning in objects that exist independent of researchers (Crotty, 1998). These meanings, when discovered via valid methodologies subscribing to scientific principles, are valid, absolute, generalizable, and capable of being repeated as the truth lies independent of the researcher.

While positivism hypothesizes absoluteness within science, post-positivism “[acknowledges] probability rather than certainty, claims a certain level of objectivity rather than absolute objectivity, and seeks to approximate the truth rather than aspiring to grasp it in its totality or essence” (Crotty, p. 29). Researchers subscribing to post-positivism acknowledge that scientific studies do not necessarily proffer dogma, but rather suggest arriving at truth within limited realms. Post-positivism also acknowledges it is nearly impossible for the researcher to be completely independent of the object to be studied or observed. Particularly with survey methodology, the researcher determines questions, participants, modality, methods for data analysis and determinations of significance. While existing theory and prior research guides survey methodology, ultimately the researcher has preconceived notions as well as the ability to interpret conclusions, omitted error bias, etc. It

is extremely possible for two different researchers to study similar phenomena and ascertain different, but related truths. Thus, researcher and object are not completely independent.

Research Design and Methodology

Survey methodology design was used in attempt to ascertain factors influencing community college student-athletes' choice of college as well as satisfaction. The study attempted to ensure sufficient diversity in its sample to enable generalization of the survey results. By using a sufficient randomization of participants, community colleges can understand the rationale for student athletes' choice to participate in their intercollegiate athletic programs, thus providing administrators better information needed to manage athletic programs, student life, enrollment management, and allocation of resources. Currently, institutions can utilize the Community College Survey of Student Engagement (CCSSE) or the Cooperative Institutional Research Program Freshman Survey (CIRP) to collect information on student engagement and/or background information on students. However, neither instrument segments student-athletes within the survey results, nor attempts to measure factors influencing choice that would be unique to student-athletes.

Surveys offer an economical approach to gathering information on topics such as student-choice. Furthermore, with self-administered surveys, particularly those administered electronically, data processing is improved as the researcher does not have to input participants' answers, decreasing the risk of processing error. Despite the benefits of surveys, there were some disadvantages to using this approach in the study. First, the researcher was not present to interpret questions for the participants; thus, unless written clearly, the questions may have been subject to multiple interpretations on the part of the

participants. Second, since the survey had predetermined questions, the researcher was not able to ask additional questions based on participants responses; anonymity prohibited identification of the participants with their answers. With interviews or other qualitative methods, the researcher discovers knowledge with the participants in a constructivist manner, not only allowing the research to guide the inquiry but also to redirect based on participants responses, which is a limitation inherent in survey research.

This study was a cross-sectional design with community college student-athletes surveyed in the late fall, immediately after the beginning of the first term of the academic year. Ideally, the study would be administered annually, allowing for comparison of a multiple of years. However, for purposes of this study, the data were collected once in December of 2010 and a second time in January of 2011.

Population and Sample

The target population was all student-athletes at public, community or junior colleges (hereafter termed “community colleges”) within the United States, with the survey population as those student-athletes that participate in NJCAA, CCCA, or Northwest Community College Athletic Association (NWCCA). The population size for the 2009-2010 was estimated to be 82,000 student-athletes.

While the unit of analysis was student-athletes, the sampling frame for the study was at the institution level with all student-athletes at the selected institutions asked to participate in the study. Table 3.1 provides the number of institutions and approximate number of athletes for the 2009-2010 academic year in each of the athletic conferences.

Table 3.1. Athletic conferences, institutions, and number of athletes

Athletic Conference	Number of Institutions 2009-2010	Approximate number of athletes 2009-2010
NJCAA	526	54,000
CCA	107	25,000
NWCCA	35	3,600
Total	668	82,600

Currently there are a total of 107 colleges and almost 25,000 student-athletes in the CCA, 526 colleges and approximately 54,000 athletes in the NJCAA, and 35 colleges and 3,580 athletes in the NWCCA. Thus, while the unit of analysis was student-athletes and this number exceeded 82,600, the sampling frame was 668 institutions from different athletic associations, geographic regions, and institution types. The intention was to randomly select an initial group of institutions and then intentionally select institutions, if needed, to ensure a balance between regions, athletic conferences, and college type per Carnegie's classification for two-year public institutions. Presumably the challenge with random sampling will be to ensure sufficient institutions by type participate in order to ensure a sufficient number of athletes to meet a 95% confidence interval. Because the sampling frame differs from the population, there was a chance for coverage bias, particularly since the sampling occurs at the institution level. Undercoverage occurs when the sampling procedures inadvertently preclude particular members from having a chance to participate. While every intent was made to ensure a variety of institutions, it was realistic to predict that particular subsets of students (such as by sport type, ethnicity, etc.) were excluded from the survey, depending on enrollment patterns and the sports offered at the institutions selected (Groves, Fowler, Couper, Lepkowski, Singer, & Tourangeau, 2004). Second, there was the possibility of

duplication error, referring to when “several frame units are mapped onto the single element in the target population,” duplication could occur with the surveys (Groves et al., p. 70), as a student could have participated in more than one sport and be listed on two rosters. The researcher attempted to build an email list and send notices to participants; however, some colleges required a campus administrator to send emails, resulting in students being asked to participate twice, an error escapable to the researcher if the student had more than one email active.

The sampling frame could also result in ineligible participants. Rosters and emails are controlled by the institution and it is extremely possible that rosters change, resulting in students being included that have withdrawn from athletics and/or the institution as enrollment information is generally correct on the academic piece, but not necessarily on the athletic side since those records are maintained by different individuals.

Data Collection Methods

While random sampling of institutions was attempted as described above, few institutions agreed to participate. As a result, sampling shifted from randomized to convenience sampling. As described in Chapter 4, institutions with known contacts to Iowa State University’s Educational Leadership and Policy Studies doctoral program were asked to participate. While these institutions represent both west and Midwest institutions, they did not at this stage represent that various athletic associations as originally intended.

Instrumentation

The survey instrument in the Appendix operationalized pieces of Perna's (2006) model on choice and the St. John et al. (1996) model on satisfaction, adding constructs from the literature discussed previously related to athletics and then questions relative to satisfaction of factors. The survey has essentially five pieces to gather information (Table 3.2).

Table 3.2. Survey instrument components

Component	Information gathered
1. Background Characteristics	Academic preparation, aspiration, and achievement Parental socioeconomic status and influence; peer influence Athletic preparation and aspirations, high school coach's influence Engagement in search process – number of colleges visited
2. Higher Education influences	Financial Aid offerings, social atmosphere, housing options, academic programs Athletics factors such as coaching staff, facilities, level of competitiveness, athletic traditions, etc.
3. Satisfaction	Satisfaction with higher education influences, both athletics and academics
4. Engagement	Engagement in the classroom, athletics, outside activities, etc.
5. Reaffirmation of choice of college	Would choose to play athletics at this college again; would choose to attend this college gain.

The survey collected general background characteristics, per Perna's model on gender, age, academic preparation, aspiration, and aptitude, parental socioeconomic status, and numbers and types of colleges visited. Second, the model collected background characteristics on athletic preparation, aspiration, and aptitude. Third, the survey collected information on factors influencing college choice. Factors included those at the individual level (peers and parents) as well as those at the collegiate level (financial aid offered, housing

options, social atmosphere, etc.). It also collected factors relative to athletics at the individual level (high school coach, fellow teammates) as well as the collegiate level (coaching staff, facilities, potential to play, etc.). Finally, the survey attempted to ascertain information about satisfaction with the factors (both general and athletic) at the collegiate level, engagement in the classroom, and then ultimately whether they would have made their same college choice again, theorizing that retention is a function of satisfaction with factors influencing choice.

Pilot Study

The survey was developed as part of the capstone project and piloted at Southwest Iowa Community College with 20-30 athletes. Students were asked to take the survey twice electronically with the survey housed on Qualtrics through the Office of Community College Research and Policy (OCCRP). From there, results were analyzed for reliability with test/re-test and result in a discussion of reliability. Before it was released for the pilot study, the survey was sent for expert review on construct and face validity to two experts on higher education: Dr. Trudi Bers at Oakton Community College and Dr. Laura Perna who developed Perna's model. Feedback from both experts were incorporated into the survey as appropriate.

Survey Administration

Sampling was done in the fall, with letters sent to the Chief Academic Officer of identified institutions, requesting them to participate. For those who agreed, the survey instrument was emailed to student-athletes' email of record during December 2010 and January 2011, following a prenotification. Second and third reminders were emailed to

students who did not respond initially. Ideally, email notices were to be delivered on different days at different times, attempting to alter the timing of emails to encourage students to participate. However, as mentioned previously, the institution did the emailing of invitations; thus, the researcher could not control the timing of email communications beyond requesting certain patterns.

Equity in Athletics Data Analysis

The Equity in Athletics Data Analysis (EADA) tool collects information relative to institutions and athletics for institutions that participate in federal funding as part of financial aid. The data analysis tools gather information on the number of athletes, by school, by gender, and by team as well as financial expenditures by schools, by gender, and by team. This creates an opportunity to measure the inputs an institution puts in an athletic program for personnel, types of programs offered, and then the resulting number of participants. It does not, however, include academic support for athletics nor investments into infrastructure (buildings, fields, etc.)

Carnegie Classification of Community Colleges

The Carnegie classification system now includes sub-categories for community colleges, based upon Katsinas work on the different segments in higher education in the community college sector. Table 3.3 reflects the different categories of community colleges in the public sector.

Each institution participating in the study would have Carnegie's classification included for those institutions as well as state where the community college is located. This would allow data to be collected by institution type as well as by region within the United

Table 3.3. Community college Carnegie classifications using Katsina's model

-
- Assoc/Pub-R-S: Associate's—Public Rural-serving Small
 - Assoc/Pub-R-M: Associate's—Public Rural-serving Medium
 - Assoc/Pub-R-L: Associate's—Public Rural-serving Large
 - Assoc/Pub-S-SC: Associate's—Public Suburban-serving Single Campus
 - Assoc/Pub-S-MC: Associate's—Public Suburban-serving Multicampus
 - Assoc/Pub-U-SC: Associate's—Public Urban-serving Single Campus
 - Assoc/Pub-U-MC: Associate's—Public Urban-serving Multicampus
 - Assoc/Pub-Spec: Associate's—Public Special Use
 - Assoc/Pub2in4: Associate's—Public 2-year Colleges under Universities
 - Assoc/Pub4: Associate's—Public 4-year, Primarily Associate's
-

States. Research questions were originally crafted to allow analysis by FTE spending and Carnegie classification; however, given the limited response to participation requests, it was not possible to analysis legitimately based on FTE and/or Carnegie Classification; thus, research questions originally related to these two dynamics were eliminated.

Variables

Dependent

Dependent variables came from two sources. First, factor analysis was used to identify the factors most heavily influencing college choice for student-athletes and to determine whether the athletic factors of significance from the factor analysis aligned with constructs for athletic factors influencing choice. Second, analysis was performed to

determine satisfaction with college choice as measured by whether students would re-select their institution for college and then secondly, re-select their institution to play athletics at. These questions were recoded as “1” for Strongly Agree and Somewhat Agree and then “0” for Somewhat Disagree and Strongly Disagree to allow binary logistic regression for research questions related to choice. The dependent variables (choice) are shown in Table 3.4.

Table 3.4. Ultimate dependent variables relative to reaffirmation of choice

Choice Variable	Scale
I would have chosen this community college, even if I did not have the opportunity to participate in athletics.	4-point scale 1=strongly disagree; 4=strongly agree
My community college is a challenging academic institution.	4-point scale 1=strongly disagree; 4=strongly agree
If I could make my college choice again, I would choose to play intercollegiate sports at this college.	4-point scale 1=strongly disagree; 4=strongly agree
I would have chosen this community college and played athletics here even if my initial choice of academic program was not offered.	4-point scale 1=strongly disagree; 4=strongly agree
I narrowed my potential choice of colleges based upon where I could engage in intercollegiate athletics.	4-point scale 1=strongly disagree; 4=strongly agree
I wish I had played sports at a four-year college.	4-point scale 1=strongly disagree; 4=strongly agree
Athletics at my community college have been more demanding than I anticipated.	4-point scale 1=strongly disagree; 4=strongly agree
Academics at my community college have been more demanding than I anticipated.	4-point scale 1=strongly disagree; 4=strongly agree
My community college was my college of first or second choice to attend.	4-point scale 1=strongly disagree; 4=strongly agree
If I could make my choice to select my college again, I would still choose this community college.	4-point scale 1=strongly disagree; 4=strongly agree

Independent

Independent variables for this study group came from background characteristics in general as well as relative to athletics and then higher education influences, relative to college in general as well as athletics. In addition, the independent variables included satisfaction with athletics and college and engagement in the classroom (these variables were not used in the research questions for this study). Table 3.5 includes the categories and associated independent variables.

Table 3.5. Independent variables

Characteristic	Variable	Coding/Scale
General	Gender	Dichotomous 1=male; 2=female
	Age	Continuous
	Race/Ethnic Identification (recoded with "1" identifying as minority; "2" identifying as non-minority)	0=White 1=Black 2=Latino 3=Other
	Hometown Community Size	1=<5000 2=5100-30000 3=30001-70000 4=70001-150000 5=>150,001
	State of Legal Residence of country if from outside the United States	Nominal
	High School Education	Dichotomous 0=GED or less; 1=High School Graduate
	High School GPA	1=<2.00 2=2.00-2.49 3=2.50-2.99 4=3.00-3.49 5=3.50-3.99 6=>3.99
	ACT	Continuous
	SAT	Continuous
	AP and/or Honors courses	Dichotomous 0=no 1=yes
	Other college credits during high school	Dichotomous 0=no 1=yes

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
	Challenging courses sought	4-point scale 1=strongly disagree; 4=strongly agree
	Years of math completed in high school	Dichotomous 0=less than 3 years 1 = 3 years or more
	Placement Reading Math Writing	0 = developmental or don't remember 1=Didn't have placement 2=college-level
	Mother's Educational Attainment	7-point scale; 1=High School or below; 7=Beyond one Master's degree
	Father's Educational Attainment	7-point scale; 1=High School or below; 7=Beyond one Master's degree
	Annual Parental Household Income	8-point scale 1=<15,000 7=120,000 or more
	Academic Goal at the community college	1=Certificate or Diploma 2=A.A. 3=A.A.S. 4=A.S. 5=Other two year degree 6=No degree sought 7= Other goals 8=Unsure at this time
	Do you intend to transfer to another institution?	Dichotomous 0=no or unsure 1=yes
	Size of High School Graduating Class	6-point scale 1=Less than 50 6=Over 250
	High school counselor's opinions High School teachers' opinions Parents' opinions on where I should attend college Friends' opinions on where I should attend college FINAL ACADEMIC GOAL LIVE ON CAMPUS Availability of academic program	Factor items 1=No importance; 4=Very Important (See Appendix XX)
		4-point scale 1=strongly disagree; 4=strongly agree

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
Athletics	Primary Sport Participating in college	1=Wrestling 2=Softball 3=Baseball 4=Basketball 5=Soccer 6=Volleyball 7=Cross-Country 8=Track 9=Football 10=Competitive Dance 11=Golf 12=Rodeo 13=Swimming 14=Other
	Primary Sport Rev vs. Non-Rev	Dichotomous 0=Non-Rev (all sports but rev) 1= Rev (Football, Basketball)
	Secondary sport if any	1=Wrestling 2=Softball 3=Baseball 4=Basketball 5=Soccer 6=Volleyball 7=Cross-Country 8=Track 9=Football 10=Competitive Dance 11=Golf 12=Rodeo 13=Swimming 14=Other
	Secondary Sport Rev vs. Non-Rev	Dichotomous 0=Non-Rev (all sports but rev) 1= Rev (Football, Basketball)
	Years played prior to college, including high school participation	Continuous
	Years engage in competitive (tournament, club or league) outside of school competition	Continuous
	Film prepared	Dichotomous 0=no 1=yes
Athletic Aspirations	1=Finish my career athletic career at this institution 2=Transfer to a four-year institution and finish my athletic career there 3=Transfer to a four-year institution and enter professional athletic competition from there. 4=Other athletic goals:	

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
Athletic personnel	<ul style="list-style-type: none"> • Head Coach • Assistant Coaches 	Factor Items 1=No importance; 4=Very important 5 = Not experienced during search process
Team	<ul style="list-style-type: none"> • Tradition and reputation of the athletic program • Athletic conference • Game schedule • Potential to travel • Historical success • Previous win/loss • Team uniforms and colors 	Factor Items 1=No importance; 4=Very important 5 = Not experienced during search process
Athletic facilities	<ul style="list-style-type: none"> • Fields, courts, gyms, or facilities for competition • Weight room and/or training facilities for athletes 	Factor Items 1=No importance; 4=Very important 5 = not experienced during search process
Athletic opportunity	<ul style="list-style-type: none"> • Potential to transfer to a competitive four year program • Potential for playing or competition time • Potential for leadership opportunity on team • Potential to be “first string’ or starter on team during first year • Potential to be starter or “first string’ before graduation Intercollegiate athletics have been a strong academic motivator for me. 	Factor Items 1=No importance; 4=Very important 5 = Not experienced during search process 4-point scale 1=strongly disagree; 4=strongly agree
Teammates	<ul style="list-style-type: none"> • Interaction with team members during college search process • Size of team roster • Diversity of team membership 	Factor Items 1=No importance; 4=Very important 5 = Not experienced during search process
College Attributes	<ul style="list-style-type: none"> • College Campus’ Size • Academic Programs available • College’s academic reputation • Housing options • Prior experience with this community college • Classroom facilities on campus • Quality of residence life • Opportunity for internships within major • Preparation for transferring to another institution • Job Placement rate • Contacts with Admissions office • Campus Visit • Tuitions and Fees for this institution • Athletic Scholarships offered • Non-athletic scholarships offered • Financial Aid package offered • Friendliness of the campus atmosphere 	Factor items 1=No importance; 4=Very Important 5 = Not experienced during college search process

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale	
Community Attributes	Community size where college is located	Factor items	
	Cultural activities available in campus town or area	1=No importance; 4=Very Important	
	Social atmosphere of campus and/or community	5 = Not experienced during search process	
	Distance of college to home	8-point scale	
	Weather climate of the college community	1=<6 miles	
	Distance from my hometown community to my community college campus	8=From outside the United States	
	(Recorded as "1" – from within 120 miles and "2" for hometown beyond 120 miles)		
Search Behavior	Film sent to colleges	Continuous 0 = no colleges	
	Film sent to this community college	Dichotomous 0=no 1=yes	
	Contact initiated by student	Dichotomous 0=no 1=yes	
	College visited before selecting community college	6-point scale 0=none 6 = 9 or more	
	Four-year colleges visited	6-point scale 0=none 6=9 or more	
	Number of colleges offering you the opportunity to play athletics	6-point scale 0=none 6= 9 or more	
	Number of four-year colleges offering opportunity to play athletics	6-point scale 0=none 6=9 or more	
	Other opportunities to play in final college choice set	4-point scale 1=strongly disagree; 4=strongly agree	
	Use of athletics to finance education	4-point scale 1=strongly disagree; 4=strongly agree	
	Financial pressures and community college	4-point scale 1=strongly disagree; 4=strongly agree	
	Community college as acceptable choice	4-point scale 1=strongly disagree; 4=strongly agree	
	<i>Satisfaction questions</i>		
	Athletic personnel	<ul style="list-style-type: none"> Relationship with Head Coach Relationship with Assistant Coaches Leadership of head coach Academic support for athletes 	Factor Items 1=No importance; 4=Very important 5 = Not experienced as of yet
Team characteristics	<ul style="list-style-type: none"> Athletic conference Game schedule Potential to travel Team success during student's experience Team uniforms and colors 	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet	

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
Athletic facilities	<ul style="list-style-type: none"> Fields, courts, gyms, or facilities for competition Weight room and/or training facilities for athletes 	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet
Athletic opportunity	<ul style="list-style-type: none"> Potential to transfer to a competitive four year program Potential for leadership opportunity on team Playing or participation time Potential to be starter or “first string’ before graduation Role on team during first year 	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet
Teammates	<ul style="list-style-type: none"> Interaction with team members during college search process Size of team roster Diversity of team membership 	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet
College Attributes	<ul style="list-style-type: none"> College Campus’ Size Academic Programs available College’s academic reputation Housing options Classroom facilities on campus Quality of residence life Opportunity for internships within major Preparation for transferring to another institution Job Placement rate Athletic Scholarships offered Financial Aid package offered Friendliness of the campus atmosphere 	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet
Community Attributes	Community size where college is located Cultural activities available in campus town or area Social atmosphere of campus and/or community Distance of college to home	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not Experienced as of yet
Academics	Relationship with academic advisor Relationship with faculty Rigor within coursework Quality of the faculty	Factor Items 1=Very Dissatisfied; 4=Very Satisfied 5=Not experienced as of yet
Engagement	Number of credit hours registered for this semester Current GPA at this college Hours/week for during season for athletics Hours/week out of season for athletics	6-point scale 1=11 or less 6= 19 or over 5 point scale 1=Below 2.0 5=>3.51 7-point scale 1=0 hours/week 7=over 25 hours/week 7-point scale 1=0 hours/week 7=over 25 hours/week

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
	Hours/week studying for class	7-point scale 1=0 hours/week 7=over 25 hours/week
	Hour/week working at job	7-point scale 1=0 hours/week 7=over 25 hours/week
	Complete reading before class	Dichotomous 0=never or rarely 1=usually or always
	Turn in assignments late or not at all	Dichotomous 0=never or rarely 1=usually or always
	Give best efforts on preparing assignments	Dichotomous 0=never or rarely 1=usually or always
	Attendance in class	Dichotomous 0=never or rarely 1=usually or always
	Use of internet, phone, music, etc. in class	Dichotomous 0=never or rarely 1=usually or always
	Complete papers greater than 10 pages	Dichotomous 0=never or rarely 1=usually or always
	Complete papers between 5-10 pages	Dichotomous 0=never or rarely 1=usually or always
	Study with peers	Dichotomous 0=never or rarely 1=usually or always
	Meet with faculty outside of class	Dichotomous 0=never or rarely 1=usually or always
	Engage in class discussion	Dichotomous 0=never or rarely 1=usually or always
	Utilization of campus tutoring or support	Dichotomous 0=never or rarely 1=usually or always
	Attendance at non-athletic campus events	Dichotomous 0=never or rarely 1=usually or always
	Participation in non-athletic clubs or groups on campus	Dichotomous 0=never or rarely 1=usually or always
College Background	Athletic Conference Athletic Association	Nominal Nominal 1=NJCAA – Division I 2=NJCAA- Division II 3 = NJCAA = Division III 4=CCCAA 5=NWCCA

Table 3.5. (Continued).

Characteristic	Variable	Coding/Scale
	Scholarships allowed	Ordinal 1 = no athletic scholarships allowed 2=partial scholarships allowed 3=full scholarships allowed
	Region	Nominal 1=Northeast 2=Mid-Atlantic 3=Southeast 4=Midwest 5=Northwest 6=Southeast
	Carnegie Classification	Nominal 1=Rural-small 2=Rural-medium 3=Rural-large 4=Suburban-single campus 5=Suburban-multicampus 6=Urban-single campus 7=Urban-multicampus

Data Analysis

Survey data were collected via web-based surveys utilizing Qualtrics software. Survey results were imported into SPSS. Methods of analysis used to answer each research question are provided in Table 3.6.

Ethical Issues

Use of Institutional Review Board (IRB) was made throughout this study. It was important that the IRB be engaged as well if the institution required approval. A few initial questions were removed from the study out of concern for harm or for making students uncomfortable. Finally, it was important for the researcher to be in sync with data analysis techniques and to ask for assistance when needed in order to ensure results are interpreted appropriately. The research design and instrument were approved conducting the study.

Table 3.6. Research questions and data analysis techniques

Research Question	Data Analysis Technique
1. What are the background characteristics of student athletes that participated in this study?	Descriptive statistics were given to describe a profile to the student-athlete participants in the study. Data was presented by background characteristics such as gender, age, race & ethnicity, search process, etc.
2. What factors are associated with college choice of community college student-athletes?	Factor Analysis was performed to identify the factors influencing college choice for the student-athletes.
3. Are there differences, based on background characteristics, including gender, race and ethnicity, distance from hometown, in the factors that influence community college student-athletes' college choice?	Mann-Whitney was performed to determine whether significant differences exist between gender, race and ethnicity, and distance from hometown.
4. Can a student-athlete's willingness to select a community college without the opportunity to play athletics be reliably predicted from the knowledge of the importance of the factors influencing choice?	Logistic Regression
5. Can a student-athlete's reaffirmation of choice of college be reliably predicted from the knowledge of the importance of the factors influencing choice, distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (Q43), annual parental household income, and finally whether this community college was the student's first or second college choice?	Logistic Regression

CHAPTER 4. DATA ANALYSIS AND RESULTS

The purpose of this study was to survey community college student-athletes, using Perna's (2006) theoretical framework, building on Hossler's conceptual model of student-choice (1987), to ascertain factors that influence community college student-athletes' choice of college. The survey, based on Perna's model of student choice, a blend of economical and sociological theory, added constructs for influences unique to student-athletes. The second purpose to the study was to investigate the extent to which variables such as race & ethnicity, gender, sport and region influence college choice of community college student athletes. The third purpose to the study was to determine whether students who are satisfied with the factors influencing their choice of college were more likely to reaffirm their choice of college.

The first research question addressed whether a survey could be crafted to illicit this information from student-athletes. While the second research question addressed background characteristics and demographics of participants in the study, the first purpose of the study was addressed by the third research question which identified factors associated with college choice of community college study-athletes. The second purpose of the study was addressed by the fourth research question which identified differences, based on background characteristics, in the factors that influenced community college student-athletes' college choice. Finally, the third purpose of the study was addressed by research questions five and six, which studied various relationships between satisfaction of choice and factors influencing college choice. This chapter presents the data analysis and findings from the study with the results, implications, and conclusions discussed in Chapter 5.

Research Question 1: What should a survey trying to evaluate college-choice of community college athletes entail?

This research question was answered in Chapter 3, with the resulting instrument located in the Appendix.

Research Question 2: What are the background characteristics of student athletes that participated in this study?

The survey was administered to athletes at eight community colleges. Originally, stratified sampling was attempted with a sample frame to survey student athletes from the NJCAA, NWCAA, and CCCCA. Ninety-eight random institutions were invited to participate in attempt to have a sample representative of the actual population in these three conferences. With the low response rate at the institution level, the sampling method shifted to that of a convenience sample with the sample frame incorporating institutions with known contacts to Iowa State University's Educational Leadership and Policy Studies doctoral program. Eleven institutions were asked to participate and eight agreed and administered the survey to all student-athletes of record in the fall of 2010, with the exception of one community college where only three rosters were invited to participate.

Approximately 1,804 student-athletes, theoretically, were sent an email invitation to complete the survey. Email invitations and follow-up invitations were distributed by the school, either by the Vice-President of Student Services, Athletic Directors, or Coaches and the institutional consents. The study was unable to confirm that student-athletes at each institution received the invitation(s) if the institutions chose to have coaches distribute the survey in lieu of a mass email. Thus, the 1,804 student-athletes figure used for response rate calculations may be artificially high.

Three hundred eighty-eight student-athletes acted upon the invitation, with 316 student athletes completing the survey (17.5% completion rate). Table 4.1 gives the descriptive statistics of demographic characteristics. Table 4.2 provides the students' academic backgrounds and educational goals. Table 4.3 describes the college search process (relative to athletics) and athletic goals for the students.

Descriptive Statistics

Demographic characteristics

Table 4.1 provides a broad background of the demographic characteristics of the participants. Slightly more than half (53.4%) of the students surveyed were in their first semester at this college and 64.7% were male. Approximately four-fifths (78.7%) had never attended another college and 46.4% were from communities of 30,000-population size or less. While 38.3% of the students were from a hometown community within 20 miles of their community college, 42% were from a hometown community either out of the country or beyond 121 miles of their community college.

Approximately 60% of the participants came from a household with a self-reported annual income of greater than \$60,000; however, only 34.1% had mother's whose highest educational attainment was a bachelor degree or above and only 33.6% had father's whose highest educational attainment was a bachelor degree or above. Finally, 26.8% of the participants identified themselves as of minority status whereas 74.2% identified themselves of non-minority status.

Table 4.1. Descriptive statistics for the demographic characteristics

Semester at this college (n=292)		Distance from hometown (n=274)	
First Semester	53.4%	30 miles or less	38.3%
Returning Student	46.6%	31 to 120 miles	19.7%
		121 to 200 miles	16.1%
		201 miles or more	19.0%
Gender (n=255)		Outside the U.S.	
Male	64.7%		6.9%
Female	35.3%	Ethnic Background (n=275)	
Number of colleges attended (n=267)		Minority	26.8%
1 college	77.2 %	Non-minority	74.2%
2 or more college	22.8%	Mother's educational attainment (n=273)	
Hometown community size (n=274)		High School or below	28.9%
< 5000	22.3%	Some college or Associate's	32.6%
5001 - 30,000	24.1%	Bachelor degree or above	34.1%
30,001 to 70,000	20.4%	Unsure	4.4%
> 70,001	33.1%	Father's educational attainment (n=271)	
Household Income (n=259)		High School or below	27.7%
> \$60,000	60.3%	Some college or Associate's	31.3%
		Bachelor degree or above	33.6%
		Unsure	7.4%

Academic background and goals

Table 4.2 gives the academic background and academic goals of the participants. 69.1 had a self-reported high school grade point average of 3.00 or higher, 42.1% reported having taken Advanced Placement (AP) or honors courses, 25.7% reported completing dual enrollment or earning post-secondary credits during high school and 51.8% reported having completed 4 years or more of high school math with a grade of “C” or above. Furthermore, despite that the students reported lower educational attainment for their parents, 37.6% reported a goal of earning a bachelor degree and 42.8% reported the goal of earning beyond a

Table 4.2. Academic background and goals

High school grade point average (n=274) (Self-Reported)		Years of high school math- grade of C or above (n=274) (Self-reported)	
3.5 or above	23.7%	4 years or more	51.8%
3.00 - 3.49	31.8%	3 to 3.5 years	32.7%
<= 2.99	37.3%	<= 2.5 years	15.3%
Unsure	7.3%		
A.P. or honors courses (n=273)		Dual enrollment or post-secondary credits (n=269)	
Yes	42.1%	Yes	35.7%
No	57.9%	No	64.3%
Size of high school graduating class (n=274)		Placement in developmental courses (n=273)	
>= 300	47.8%	Writing	14.0%
150 to 299	21.9%	Reading	12.5%
<= 149	30.3%	Math	27.4%
Credits enrolled this semester (n=272)		Overall educational attainment goal (n=266)	
less than 12	2.9%	Associate's degree or less	10.3%
12 to 15 credits	68.1%	Bachelor's degree	37.6%
16 or more credits	29.0%	Beyond a bachelor's degree	42.8%
Educational goal at this college (n=274)			
Certificate, diploma, or no degree	6.9%		
Associate or Arts degree	49.6%		
Other two year degree	23.0%		
Unsure at this time	20.5%		

bachelor degree. The most common degree goal for this community college was that of an Associate of Arts (A.A.) with 49.6% expecting to earn that degree.

Of the respondents, 47.8% of the students reported coming from a high school graduating class greater than 300. Despite the high self-reported grade point averages, 14.0% placed into developmental writing courses, 12.5% placed into developmental reading courses, and finally, 27.4% placed into developmental math courses. Over two thirds of the students were enrolled in 12 to 15 credits hours this semester.

College search process and athletic goals

Table 4.3 illustrates the college search process relative to athletics and athletic goals for the students. Approximately half (50.5%) of the participants indicated that they had prepared film and/or statistics of their previous athletics success and highlights and of those that had prepared film and/or statistics, 56.1% had sent the film and/or statistics to 3 or more colleges and 63% had sent it to this community college. Of all participants, 60.5% reported having initiated the contact with this community college's athletic program. Finally, only 29.4% indicated they expected to finish their athletic career at this community college with 56.6% expecting to finish their athletic career at a four-year institution and 27.2% expecting to finish in professional competition.

Students who participated in this survey represented a variety of sports. Table 4.4 identifies the distribution of sports played. Interestingly, sixty-four students identified themselves as being involved in a secondary sport as well, with track the most common secondary sport.

Table 4.3. College search process and athletic goal

Number that prepared film or statistics (n=273)		Number of colleges film/stats sent to (n=138)	
Yes	50.5%	1 or 2 colleges	43.9%
No	49.5%	3 or more colleges	56.1%
Number that prepared film or statistics and sent it to this community college (n=138)		Number initiating contact with this community college's athletic program (n=271)	
Yes	63.0%	Yes	60.5%
No	37.0%	No	39.5%
Personal Athletic Goal(s) (n=316)			
Finish my career at this college	29.4%		
Finish athletic career at a 4-yr college	56.6%		
Professional Athletic competition	27.2%		
Other	4.4%		

Table 4.4. Primary sport participating in ($n=273$)

Sport	Percent	Sport	Percent
Baseball	30.30%	Football	3.60%
Softball	6.20%	Golf	2.60%
Basketball	6.20%	Rodeo	4.70%
Soccer	17.50%	Swimming	3.60%
Volleyball	10.90%	Track*	1.50%
Cross Country	3.30%	Other	9.10%

Note: Sixty-four students reported being involved in a secondary sport. Of the secondary sports reported, Track was the most common with 16 students identifying it as their secondary sport.

Research Question 3: What factors are associated with college choice of community college student-athletes?

An exploratory factor analysis was conducted on the 47 items. The dataset met the requirements for factor analysis as the data had been measured on an interval scale, the respondents varied in their scores on the variables, and the scores had appropriate linear correlations with each other (Foster, Barkus, & Yavorsky, 2006). The survey had 316 respondents. Tabachnick and Fidell (2001) suggested that 300 cases is a good size for factor analysis, but that fewer may be needed, depending on the loadings of the factors (p. 588). No significant differences were found in the results when the analysis was conducted on the 270 respondents that had no missing items compared to the analysis conducted on the 316 respondents replacing mean pairwise and then replacing missing data with estimated means.

Principal component analysis (PCA) was conducted first using orthogonal rotation (varimax) to determine the ideal number of factors to use. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, $KMO = .907$, and all KMO values for individual items were $>.83$, which is well above the acceptable limit of $.5$. Bartlett's test of sphericity, $\chi^2(1081) = 8416.071, p < .001$, indicated that the correlations between items were sufficiently large for PCA. The initial analysis was run to obtain eigenvalues for each

component in the data. Ten components had eigenvalues over Kaiser's criterion of 1 and in combination explained 65.542% of the variance. The scree plot was slightly ambiguous and showed inflexions that would suggest retaining four or eight components, while Tabachnick and Fidell suggested that a dataset of 47 variables should result in 9 to 15 factors (2001).

Principal Axis Factoring (PAF) was then conducted, as PCA should be used as an initial screen for correlation, number of factors, and then possible variables to exclude (Coughlin, 2005; Tabachnick & Fidell, 2001). The model used orthogonal rotation and then oblique which did not enhance interpretation. Thus, PAF with orthogonal rotation (varimax) was used to construct the factors. The Kaiser-Meyer-Olkin still verified the sampling adequacy for the analysis, $KMO = .907$, and all KMO values for individual items were $> .828$, which is well above the acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity, $\chi^2(1081) = 8416.071$, $p < .001$, still indicated that the correlations between items were sufficiently large for PAF. The initial analysis ran to obtain eigenvalues for each component in the data. Seven components still had eigenvalues over Kaiser's criterion of 1.00 and in combination explained 52.052% of the variance. The scree plot still was slightly ambiguous and showed inflexions that would suggest retaining four or eight component. Only one variable double-loaded and PAF suggested three variables should be dropped due to loadings less than .4 (Coughlin, 2005). The variable that double-loaded was retained as it theoretically aligned with the constructs.

Ultimately, exploratory factor analysis should be only a guide to construct identification (Coughlin, 2005). The ten factors suggested by PCA and then ten factors with PAF were logical and align with prior studies and then logically connect within the variables. The last three variables with PAF were retained. PAF is a tighter analysis resulting in lower

eigenvalues. The loadings all exceed .4 and while the eigenvalues are slightly below one, the variance explained is smaller, the factors and embedded variables are theoretically supported and may be factors influencing choice for all athletes, resulting in small variance. Thus, ten constructs were used within the study with each construct tested for reliability with Cronbach's Alpha. Tabachnick and Fidell (2001) suggest that a Cronbach's alpha of greater than .7 suggests reliability. All ten of the constructs met this criteria. Figure 4.1 illustrates the corresponding scree plot for PAF with varimax rotation, Table 4.5 provides the resulting factors with the corresponding loadings, and Table 4.6 gives the eigenvalues, variance explained, number of items, and Cronbach's alpha.

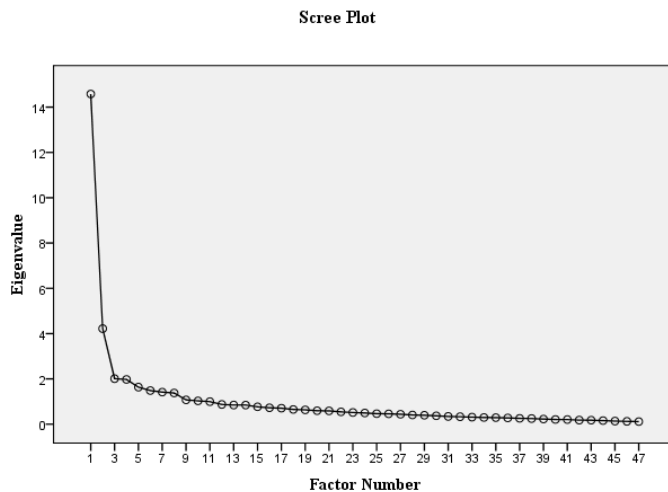


Figure 1. Principal Axis Factoring - Varimax Rotation

Figure 4.1. Corresponding scree plot for number of factors

Table 4.5. Rotated factor matrix for principal axis factor analysis based on importance

Importance factor	1	2	3	4	5	6	7	8	9	10
College's academic reputation	.677									
Classroom facilities on campus	.671									
Opportunity for internships within major	.650									
Contacts with Admissions Office	.593									
Job placement rate	.591									
Social atmosphere of campus and/or community	.586									
Preparation for transferring to another institution	.580									
Academic programs available	.522									
Potential to be starter or 'first string' before graduation		.874								
Potential to be 'first string' or starter on team during first year		.780								
Potential for playing or competition time		.747								
Potential for leadership opportunity on team		.607								
Potential to transfer to a competitive four-year college athletic program		.536								
<i>College's athletic conference</i>										
Friend(s)' opinions on where I should attend college			.657							
Weather climate of the college community			.572							
Parent(s)' opinions on where I should attend college			.516							
Opinion of fellow high school teammates			.419							
Friendliness of the campus atmosphere			.404							
Importance.-Size of team roster										
Game schedule				.620						
Potential to travel for tournaments or competition				.575						
Team uniforms and colors				.503						
College campus' size										
Historical success of the team					.722					
Team's previous two-year win/loss record or success with competitions					.638					
Tradition & Reputation of Athletic Programs					.576					
High school teachers' opinions						.833				
High school counselor's opinions						.758				
Prior experience with this community college						.414				

Table 4.5. (Continued).

Importance factor	1	2	3	4	5	6	7	8	9	10
<i>Opinion of high school athletic coach(es)</i>										
Non-athletic scholarship offered								.727		
Financial aid package offered								.598		
Athletic scholarship offered								.569		
Tuition and fees for this institution								.402		
Housing options								.749		
Quality of residence life								.573		
Community size where college is located								.497		
Cultural activities available in campus town or area								.411		
Campus visit										
Importance-Fields, courts, gyms or facilities for competition									.666	
Weight room and/or training facilities for athletes									.539	
Academic support for athletes									.481	
Interaction with Team Members										.592
Head Coach		.426								.536
Assistant Coaches										.426

Table 4.6. Factor reliability

Factor	1	2	3	4	5	6	7	8	9	10
Eigenvalue	14.2	3.8	1.5	1.6	1.2	1.1	1.0	1.0	0.7	0.6
% of variance	30.1	8.1	3.4	3.3	2.6	2.3	2.1	2.0	1.4	1.4
# of items	8	6	5	4	3	3	4	4	3	3
Chronbach's Alpha	0.89	0.78	0.74	0.80	0.87	0.82	0.73	0.80	0.80	0.76

As mentioned previously, ten factors were retained given the literature based on influencers on college choice, Perna's model of suggested factors influencing college choice, the eigenvalues from PCA and the eigenvalues from PFA. Since PFA is somewhat more conservative than PCA, it is expected that the eigenvalues would be slightly lower and while some of the research question ask about variance between groups, other research questions ask for rankings of factors where variance may not be of utmost importance. Finally, and most importantly, many of the variables grouped together in factors in ways that align intuitively or in the literature. The ten factors have been given a name to represent it as a construct. The names are given in Table 4.7.

Table 4.7. Factor names

<i>Number</i>	<i>Name</i>
1	Academic Programs and Social Atmosphere
2	Individual Role on Team and Athletic Goals
3	Peers, Parents, Friendliness of Campus, and Weather
4	Secondary Team Characteristics
5	Team Reputation and Success
6	High School Influencers and Prior Experiences
7	Aid and Tuition
8	Housing and Campus Life
9	Facilities and Academic Support for Athletes
10	Interactions with Coaches and Teammates

Finally, factors were computed by including the mean for responses in the individual variables. Missing data were not included in the factor computations and variables that were not experienced during the college choice process were coded a zero, meaning no influence on the college choice process. The mean responses for the 10 factors are shown in Table 4.8.

Table 4.8. Mean factor responses

Factor	Mean	Std. Dev.	N
Individual Role on Team and Athletic Goals	3.39	.76	316
Facilities and Academic Support for Athletes	3.17	.94	316
Interactions with Coaches and Teammates	3.13	.99	316
Aid and Tuition	3.10	.89	315
Team Reputation and Success	3.06	.98	316
Academic Programs and Social Atmosphere	3.01	.81	314
Secondary Team Characteristics	2.62	.92	315
Housing and Campus Life	2.55	.96	314
Peers, Parents, Friendliness of Campus and Weather	2.53	.77	316
High School Influencers and Prior Experiences	2.06	1.05	314

The highest mean responses are for Individual Role on Team and Athletics Goals, Facilities and Academic Support for Athletes, and then Interactions with Coaches and Teammates. Five of the top six related to athletics and Aid and Tuition, the one not directly related to athletics arguably could be, given that aid encompasses athletic scholarships. Academic Programs and Social Atmosphere was sixth as a factor in terms of influencing choice; however, given the high percentage of students expecting to earn the Associate of Arts degree (AA), it is extremely plausible that this factor did not rank higher, given the prevalence of the AA at most community colleges.

Research Question 4: Are there differences, based on background characteristics, including gender, race and ethnicity, type of sport, distance from hometown, in the factors that influence college choice?

Gender

H_{o1} = *There are no differences between male community college student-athletes and female community college student-athletes in the factors influencing their college choice.*

H_{a1} = *There are differences between male community college student-athletes and female community college student-athletes in the factors influencing their college choice.*

General rankings for factors influencing choice, based on mean responses associated with gender, are given in Table 4.9. Raw mean responses show that Facilities and Academic Support for Athletes was the top factor for females ($n=90$) with a mean response of 3.34, followed by Individual Role on Team and Academic Goals ($n=90$), mean response of 3.30 and Academic Programs and Social Atmosphere ($n=90$), mean response of 3.28. Males' top factor using raw mean was Individual Role on Team and Academic Goals ($n=165$), mean response of 3.40, followed by Interaction with Coaches and Teammates ($n=165$), mean response of 3.11, and then Team Reputation and Success ($n=165$) and mean response of 3.10. Academic Programs and Social Atmosphere ranked sixth ($n=164$), mean response 2.83.

Prior to performing independent t-tests, the factors constructs were reviewed for normality with the Kolmogorov-Smimov test and the results are in Table 4.10. Interaction with Coaches & Teammates, $D(314) = .191, p < .001$, Facilities & Academic Support for Athletes, $D(314) = .192, p < .001$, Housing & Campus Life, $D(314) = .102, p < .001$, Aid & Tuition, $D(314) = .162, p < .001$, High School Influences & Prior Experiences, $D(314) = .106, p < .001$, Team Reputation & Success, $D(314) = .170, p < .001$, Secondary Team

Table 4.9. Raw means and rank for choice based on gender

Factor	Gender	N	Mean	Rank	Std. Deviation	Std. Error Mean
Secondary Team Characteristics	Male	164	2.55	7	0.85	0.07
	Female	90	2.63	7	0.97	0.10
Interaction with Coaches & Teammates	Male	165	3.11	2	0.89	0.07
	Female	90	3.09	6	1.16	0.12
Facilities and Academic Support for Athletes	Male	165	3.04	4	0.94	0.07
	Female	90	3.34	1	0.91	0.10
Housing and Campus Life	Male	164	2.48	8	0.93	0.07
	Female	90	2.54	9	1.02	0.11
Aid and Tuition	Male	165	3.02	5	0.86	0.07
	Female	90	3.18	4	0.95	0.10
High School Influences & Prior Experiences	Male	164	1.82	10	0.99	0.08
	Female	90	2.31	10	1.00	0.11
Team Reputation and Success	Male	165	3.10	3	0.95	0.07
	Female	90	3.11	5	0.95	0.10
Peers, Parents, Friendliness of Campus & Weather	Male	165	2.49	8	0.75	0.06
	Female	90	2.55	8	0.75	0.08
Individual Role on Team and Athletic Goals	Male	165	3.40	1	0.69	0.05
	Female	90	3.30	2	0.87	0.09
Academic Programs & Social Atmosphere	Male	164	2.83	6	0.81	0.06
	Female	90	3.28	3	0.68	0.07

Characteristics, $D(314) = .100, p < .001$, Peers, Parents, Friendliness of Campus & Weather, $D(314) = .065, p < .01$, Individual Role on Team & Athletic Goals, $D(314) = .211, p < .001$, Academic Programs & Social Atmosphere, $D(314) = .111, p < .001$, all were significantly non-normal.

Table 4.10. Tests of normality with factor constructs

Tests of Normality	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Interaction with Coaches & Teammates	.191	314	.000	.814	314	.000
Facilities & Academic Support for Athletes	.192	314	.000	.819	314	.000
Housing & Campus Life	.102	314	.000	.962	314	.000
Aid & Tuition	.162	314	.000	.882	314	.000
High School Influences & Prior Experiences	.106	314	.000	.959	314	.000
Team Reputation & Success	.170	314	.000	.859	314	.000
Secondary Team Characteristics	.100	314	.000	.962	314	.000
Peers, Parents, Friendliness of Campus & Weather	.065	314	.003	.981	314	.000
Individual Role on Team & Athletic Goals	.211	314	.000	.752	314	.000
Academic Programs & Social Atmosphere	.111	314	.000	.929	314	.000

Because the data tested significantly for non-normality, non-parametric tests were used to test whether the mean factor response for females were significantly different than male factor responses (see hypotheses). The Mann-Whitney test was performed and the role of Interactions with Coaches and Teammates for females ($M=3.09$) did not differ significantly from males ($M=3.11$), $U=733.00$, $z=1.25$, ns, and $r=-.078$. Facilities & Academic Support for Athletes for females ($M=3.34$) did differ significantly from males ($M=3.04$), $U=5765.5$, $p < .001$, and $r= -.19$. Thus, the null hypothesis should be rejected, as females were more likely to be influenced in college choice by athletic facilities and academic support available for athletes. The impact of Housing & Campus Life did not differ significantly for females ($M=2.54$) from males ($M=2.48$), $U=7050.0$, $z= -.591$, ns, and $r= -.04$. Aid and Tuition did not differ significantly for females ($M=3.18$) compared to males ($M=3.02$), $U=6455.0$, $z= -1.745$, ns, $r= -.11$, but the role of High School Influences & Prior Experiences for females ($M=2.31$) did differ significantly from males ($M=1.82$),

$U=5265.5$, $z= -3.8$, $p < .001$, $r= -.24$. Females gave significantly greater weight to their high school counselors, teachers, and then prior experiences with their community colleges than males did during the college search.

Team Reputation & Success did not differ significantly for females ($M = 3.10$) compared to males ($M=3.11$), $U=7368.0$, $z= -.103$, *ns*, $r=.01$ and neither did Secondary Team Characteristics for females ($M=2.63$) compared to males ($M=2.55$), $U=6835.00$, $z= -.977$, *ns*, $r= -.06$. Peers, Parents, Friendliness of Campus & Weather did not differ significantly for females ($M=2.55$), compared to males ($M=2.49$), $U=7094.5$, $z= -.589$, *ns*, $r= -.04$ and the factor for Individual Role on Team & Athletic Goals did not differ significantly for females ($M=3.30$) compared to males ($M=3.40$), $U=7156.5$, $z= -.482$, *ns*, $r= -.03$. However, Academic Programs and Social Atmosphere did differ significantly for females ($M=3.28$) compared to males ($M=2.83$), $U=4820$, $z= -.4579$, $p < .001$, $r= -.29$. Females were more likely to give greater importance to academic program and the social atmosphere of the community college than males were in college choice. Table 4.11 includes the findings relative to differences in mean responses to factor constructs between males and females.

Race and Ethnicity

H₀₂ = There are no differences between minority community college student-athletes and non-minority community college student-athletes in the factors influencing their college choice.

H_{a2} = There are differences between minority community college student-athletes and non-minority community college student-athletes in the factors influencing their college choice.

General rankings for factors influencing choice, based on mean responses associated with gender, are given in Table 4.12. Students identifying themselves as minority status

Table 4.11. Differences between females and males on factor responses

Mann-Whitney Test	<i>n</i>	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Interactions with Coaches and Teammates	255	6733	-1.251	ns	-0.078
Facilities and Academic Support for Athletes	255	5765.5	-3.005	< .01	-0.19
Housing and Campus Life	254	7050	-0.591	ns	-0.04
Aid and Tuition	255	6455	-1.745	ns	-0.11
High School Influencers and Prior Experiences	254	5265.5	-3.8	< .001	-0.24
Team Reputation and Success	255	7368	-0.103	ns	-0.01
Secondary Team Characteristics	254	6835	-0.977	ns	-0.06
Peers, Parents, Friendliness of Campus, and Weather	255	7094.5	-0.589	ns	-0.04
Individual Role on Team and Athletic Goals	255	7156.5	-0.482	ns	-0.03
Academic Programs and Social Atmosphere	254	4820	-4.579	< .001	-0.29

Note: ns means non-significant.

were coded a “1” and students identifying themselves as not minority status were coded a “2.” The factors with the highest mean responses were the same between both groups. The most influential factor for both groups was Individual Role on Teams and Athletic Goals. Minority students’ ($n = 63$) mean response was 3.38 and non-minority students’ ($n = 204$) mean response was 3.37. The second most influential factor for each group was Facilities and Academic Support for Athletes. Minority students ($n = 63$) had a mean response of 3.16 and non-minority students ($n = 204$) had a mean response of 3.14.

Finally, the third most influential factor was Interactions with Coaches and Teammates. Minority students ($n = 63$) had a mean response of 3.15 and non-minority students ($n = 204$) had a mean response of 3.06. In general, there was very little difference between the rankings of the factors between these two groups.

Table 4.12. Raw means and rank in choice based on minority status identification (N=316)

	Race and Ethnic Identification	N	Mean	Rank	Std. Dev.	Std. Error Mean
Secondary Team Characteristics	Minority	63	2.76	7	1.02	0.13
	Majority	203	2.53	7	0.87	0.06
Interaction with Coaches & Teammates	1.00	63	3.15	3	1.11	0.14
	2.00	204	3.06	3	0.97	0.07
Facilities & Academic Support for Athletes	1.00	63	3.16	2	1.02	0.13
	2.00	204	3.14	2	0.93	0.06
Housing and Campus Life	1.00	63	2.60	8	1.09	0.14
	2.00	203	2.49	8	0.92	0.06
Aid and Tuition	1.00	63	3.14	4	0.88	0.11
	2.00	204	3.03	5	0.91	0.06
High School Influences & Prior Experiences	1.00	63	2.25	10	1.09	0.14
	2.00	203	1.92	10	1.00	0.07
Team Reputation & Success	1.00	63	3.10	5	1.03	0.13
	2.00	204	3.06	4	0.95	0.07
Peers, Parents, Friendliness of Campus & Weather	1.00	63	2.55	9	0.83	0.10
	2.00	204	2.49	9	0.74	0.05
Individual Role on Team & Athletic Goals	1.00	63	3.38	1	0.79	0.10
	2.00	204	3.37	1	0.75	0.05
Academic Programs & Social Atmosphere	1.00	63	3.09	6	0.82	0.10
	2.00	203	2.92	6	0.81	0.06

The Mann-Whitney test was performed to determine whether there were any significant differences in the mean responses on the factors between the two groups. The null hypothesis was not rejected as none of the factor mean responses differed significantly between the groups leading to the conclusion that there are not significant differences in the role of the factor constructs on community college athletes based on minority status identification. The results are provided in Table 4.13.

Table 4.13. Differences between minorities and non-minorities on factor responses

Mann-Whitney Test	<i>n</i>	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Interactions with Coaches and Teammates	267	5605.0	-1.557	ns	-0.10
Facilities and Academic Support for Athletes	267	6090.5	-.638	ns	-0.04
Housing and Campus Life	266	5890.0	-.949	ns	-0.06
Aid and Tuition	267	5988.5	-.825	ns	-0.05
High School Influencers and Prior Experiences	266	5380.0	-1.915	ns	-0.12
Team Reputation and Success	267	6073.0	-.672	ns	-0.04
Secondary Team Characteristics	266	5444.5	-1.787	ns	-0.11
Peers, Parents, Friendliness of Campus, and Weather	267	6110.0	-.592	ns	-0.04
Individual Role on Team and Athletic Goals	267	5966.5	-.866	ns	-0.05
Academic Programs and Social Atmosphere	266	5565.0	-1.558	ns	-0.10

Note: ns means non-significant.

Distance from Home

H_{03} = *There are no differences between community college student-athletes with a hometown within 120 miles and community college student-athletes with a hometown beyond 120 miles in the factors influencing their college choice.*

H_{a3} = *There are no differences between community college student-athletes with a hometown within 120 miles and community college student-athletes with a hometown beyond 120 miles in the factors influencing their college choice.*

General rankings for factors influencing choice, based on mean responses associated with distance from home, are given in Table 4.14. Students identifying themselves as from a hometown within 120 miles of their community college were coded a “1” and students identifying themselves as from a hometown community further than 120 miles were coded “2”. The factors with the highest mean responses were the same between both groups. The most influential factor for both groups was Individual Role on Teams and Athletic Goals. Students from a hometown within 120 miles ($n = 159$) mean response was 3.30 and students

Table 4.14. Raw means and rank in choice based on distance from home

	Distance	N	Mean	Rank	Std. Dev.	Std. Error Mean
Interaction with Coaches & Teammates	1	159	3.07	5	1.10	0.09
	2	115	3.14	2	0.84	0.08
Facilities and Academic Support for Athletes	1	159	3.23	2	0.93	0.07
	2	115	3.05	5	0.94	0.09
Housing and Campus Life	1	158	2.42	9	0.99	0.08
	2	115	2.67	7	0.91	0.08
Aid and Tuition	1	159	3.03	6	0.97	0.08
	2	115	3.13	3	0.80	0.08
High School Influences & Prior Experiences	1	158	2.14	10	1.04	0.08
	2	115	1.81	10	0.97	0.09
Team Reputation and Success	1	159	3.09	3	0.97	0.08
	2	115	3.07	4	0.96	0.09
Secondary Team Characteristics	1	158	2.59	7	0.97	0.08
	2	115	2.58	8	0.81	0.08
Peers, Parents, Friendliness of Campus & Weather	1	159	2.56	8	0.78	0.06
	2	115	2.44	9	0.72	0.07
Individual Role on Team and Athletic Goals	1	159	3.30	1	0.83	0.07
	2	115	3.49	1	0.63	0.06
Academic Programs & Social Atmosphere	1	158	3.09	4	0.78	0.06
	2	115	2.83	6	0.84	0.08

Note: Distance = 1 indicates students from a hometown within 120 miles; Distance =2 indicates students from a hometown from further than 120 miles.

from further than 120 miles ($n = 115$) mean response was 3.48. The second most influential factor for students within 120 miles was Facilities and Academic Support for Athletes. These students ($n = 159$) had a mean response of 3.24. Students from beyond 120 miles ($n = 115$) ranked Interactions with Coaches and their Teammates as the second most influential factors with a mean response of 3.14. In general, there were some, but minor differences in the rankings of the two groups.

The Mann-Whitney test was performed to determine whether there were any significant differences in the mean responses on the factors between students whose

hometown was within 120 miles of campus and students whose hometown was more than 120 miles. Four factors were significantly different between the two groups and thus the null hypothesis was rejected. Students with a hometown within 120 miles ($M=3.23$) were significantly more likely to be influenced by Facilities and Academic Support for Athletes than students with a hometown further than 120 miles ($M=3.05$), $U=776.5$, $z=2.15$, $p < .05$, $r=.13$. Students from further than 120 miles ($M=2.67$) were significantly more likely to be influenced by Housing and Campus Life than students from less than 120 miles ($M=2.42$), $U=7818.0$, $z=1.97$, $p < .05$, $r=.12$. Students from further than 120 miles ($M=1.81$) were also significantly less likely to be influenced by High School Influencers and Prior Experiences than students from within 120 miles ($M=2.13$), $U=7312.5$, $z=2.77$, $p < .01$, $r=.17$. Finally, students from 120 miles or more ($M=2.83$) were significantly less likely to be influenced by Academic Programs and Social Atmosphere than students from within 120 miles ($M=3.09$), $U=7376.5$, $z=2.66$, $p < .01$, $r=.16$. The results are presented in Table 4.15.

Table 4.15. Differences between factor responses based on distance from hometown

Mann-Whitney Test	<i>n</i>	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Interactions with Coaches and Teammates	274	8691.0	-.71	ns	-0.04
Facilities and Academic Support for Athletes	274	7776.5	-2.15	< .05	-0.13
Housing and Campus Life	273	7818.0	-1.97	< .05	-0.12
Aid and Tuition	274	8853.0	-.45	ns	-0.03
High School Influencers and Prior Experiences	273	7312.5	-2.77	< .01	-0.17
Team Reputation and Success	274	8964.5	-.28	ns	-0.02
Secondary Team Characteristics	273	8872.0	-.33	ns	-0.02
Peers, Parents, Friendliness of Campus, and Weather	274	8290.0	-1.32	ns	-0.08
Individual Role on Team and Athletic Goals	274	7952.0	-1.86	ns	-0.11
Academic Programs and Social Atmosphere	273	7376.5	-2.66	< .01	-0.16

Note: ns means non-significant.

Research Question 5: Can a student-athlete's willingness to select a community college without the opportunity to play athletics (choosewithoutathletics) be reliably predicted from the knowledge of the importance of the factors influencing choice (Academic Programs & Social Atmosphere, Secondary Team Characteristics, Facilities and Academic Support for Athletes, Individual Role on Team and Athletic Goals, High School Influences and Prior Experiences,) distance from hometown (Q25), whether the student initiated contact with the community college athletic program (Q35), whether it was the student's first semester at the college (Q43), whether the student narrowed their choices based on athletics (Q4-10), and finally whether this community college was the student's first or second college choice (Q4-14)?

H_{o4} = A student-athlete's willingness to select a community college without the opportunity to play athletics cannot be reliably predicted from the knowledge of the importance of factors influencing choice.

H_{a4} = A student-athlete's willingness to select a community college without the opportunity to play athletics can be reliably predicted from the knowledge of the importance of factors influencing choice.

One of the goals of college choice studies is to determine the importance of factors upon choice; this importance ultimately can be expressed as whether the student would have chosen this college without the factors being present. Participants were asked to respond to the following statement: "I would have chosen this community college even if I did not have the opportunity to play intercollegiate athletics." Students either strongly agreed (4), somewhat agreed (3), somewhat disagreed (2), or strongly disagreed (1). This question was recoded into a new variable, *choosewithoutathletics* with "1" coded for students that either strongly agreed or somewhat agreed and a "0" coded for students who somewhat disagreed or strongly disagreed. Of the 250 students responding, 159 students either strongly disagreed or somewhat disagreed, indicating they were unlikely to have chosen this community college absent their ability to engage in intercollegiate athletics.

Binary logistic regression was used to test whether one could reasonably predict this willingness to select a community college based upon knowledge of factors relative to the

search process. Factor scores were tested first for multicollinearity, utilizing linear regression. The results are shown in Table 4.16. None of the Collinearity Statistics had a tolerance below .1 and VIF was < 10.0 , indicating that multicollinearity is not a problem (Mertler & Vannatta, 2010).

Table 4.16. Collinearity diagnostics

(Constant)	Collinearity Statistics	
	Tolerance	VIF
Interactions with Coaches and Teammates	.486	2.059
Facilities and Academic Support for Athletes	.503	1.989
Housing and Campus Life	.513	1.948
Aid and Tuition	.685	1.460
High School Influences and Prior Experiences	.610	1.639
Team Reputation and Success	.463	2.159
Secondary Team Characteristics	.488	2.047
Peers, Parents, Friendliness of Campus & Weather	.623	1.605
Individual Role on Team & Athletic Goals	.450	2.221
Academic Programs & Social Atmosphere	.430	2.326

Data screening was performed to identify outliers in the data. Mahalanobis Distance was calculated for the participants ($n=314$); five cases exceeded the threshold for Mahalanobis Distance and were removed as outliers. These five cases are as identified in Table 4.17.

Forward logistic regression was conducted to determine which independent variables are predictors of student-athletes' confirmation of college without the opportunity to play intercollegiate athletics. Regression results rejected the null hypothesis and indicated that the overall model fit of six predictors (*High School Influences & Prior Experiences, Secondary*

Table 4.17. Mahalanobis distance – extreme values

		Case Number	Value
Highest	1	277	72.64
	2	65	47.53
	3	145	45.34
	4	219	42.16
	5	166	40.50
Lowest	1	243	1.72
	2	15	1.85
	3	195	2.37
	4	158	2.37
	5	56	2.41

Team Characteristics, Q25, Q35, Q43, and Individual Role on Team and Athletic Goals) was respectable (-2 Log Likelihood = 250.489, $\chi^2(6)=63.836$, $p < .001$) but was statistically reliable in distinguishing between athletes who would have chose their community college even if they could not play intercollegiate athletics and those that would not have chose their community college if they could not have played intercollegiate athletics. The model correctly classified 75.4% of the cases, and, more importantly, correctly classified 86.3% of the student-athletes who would not have chosen this community college absent the opportunity to play intercollegiate athletics. Regression coefficients are presented in Table 4.18. *Wald* statistics indicated that high school influences and prior experiences with a community college, secondary team characteristics such as game schedule, uniforms, and team diversity, whether a student was in his or her first semesters, whether a student initiated contact with this school, and then distance from hometown significantly predicted whether a student-athlete would still choose a community college even if he or she did not have the opportunity to engage in intercollegiate athletics.

Table 4.18. Regression coefficients for variables influencing affirmation of choice without opportunity to play

	<i>B</i>	<i>Wald</i>	<i>df</i>	<i>p</i>	Odds Ratio
High School Influences & Prior Experiences	.400	5.488	1	.019	1.493
Secondary Team Characteristics	.737	10.246	1	.001	2.090
Q25	-.285	12.397	1	.000	.752
Q35	-.937	7.786	1	.005	.392
Individual Role on Team & Athletic Goals	-1.162	17.405	1	.000	.313
Q43	.812	6.692	1	.010	2.252

Research Question 6: Can a student-athlete's reaffirmation of choice of college (choicebinomial) be reliably predicted from the knowledge of the importance of the factors influencing choice (Academic Programs & Social Atmosphere, Team Reputation & Success, Secondary Team Characteristics, Housing & Campus Life, Facilities and Academic Support for Athletes, Aid & Tuition, Individual Role on Team & Athletic Goals,) distance from hometown (Q25), whether the student initiated contact with the community college athletic program (Q35), whether it was the student's first semester at the college (Q43), annual parental household income (Q39) and finally whether this community college was the student's first or second college choice (Q4-14)?

H₀₅ = A student-athlete's reaffirmation of choice of college cannot be reliably predicted from the knowledge of the importance of actors influencing choice, distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (Q43), annual parental household income, and finally whether this community college was the student's first or second college choice?

H_{a5} = A student-athlete's reaffirmation of choice of college can be reliably predicted from the knowledge of the importance of actors influencing choice, distance from hometown, whether the student initiated contact with the community college athletic program, whether it was the student's first semester at the college (Q43), annual parental household income, and finally whether this community college was the student's first or second college choice?

Forward logistic regression was conducted to determine which independent variables are predictors of student-athletes' confirmation of college choice. Regression results reject the null hypothesis and indicated that the overall model fit of four predictors (*Q35, Team Reputation & Success, Housing and Campus Life, and Individual Role on Team and Athletic Goals*) was respectable (-2 Log Likelihood = 174,866, $\chi^2(4)=33.757$, $p < .001$) but was

statistically reliable in distinguishing between athletes who would have chosen their community college again if they could make the choice again.. The model correctly classified 84.2% of the cases, including 97.9% of the athletes who would choose their college again, but only 17.9% correctly of those that would not choose the same community college again. Regression coefficients are presented in Table 4.19. *Wald* statistics indicated that whether a student initiated contact with this school, history and reputation of the athletic program, facilities and academic support for student athletes, and then role on the team and academic goals in the future, significantly predicted whether a student-athlete would still choose a community college again if he or she could make the decision over again.

Table 4.19. Regression coefficients for variables for affirmation of choice

	<i>B</i>	<i>Wald</i>	<i>df</i>	<i>p</i>	Odds Ratio
Team Reputation and Success	.786	9.915	1	.002	2.194
Facilities & Academic Support for Athletes	.640	5.993	1	.014	1.897
Individual Role on Team & Athletic Goals	-.958	6.992	1	.008	.384
Q35	-.861	4.753	1	.029	.423

CHAPTER 5. DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Intercollegiate athletics have been scrutinized for a plethora of reasons, including for allegedly adding to the increasing cost of higher education via inappropriate use of public funding, professionalizing athletes at the expense of academics, causing mission shift or creep within institutions, and commercializing particular institutions of higher education. Despite the significant conversation of the role of athletics at NCAA Division I and Division II institutions, Division III, NAIA, and community college athletic divisions remain woefully absent from the literature on academics and athletics, economic impacts of athletics, student athlete development, etc.

For some institutions, athletics are a significant piece to enrollment. Table 5.1 describes the relationship between the average athletic participation and average full-time enrollment at various sectors in higher education in Fall 2008. Despite the large exposure of Division I and Division II athletes, Division III and NAIA had almost one fifth of the full-time equivalent enrollment on campuses involved in athletics. Even the community colleges

Table 5.1. Number of athletes and percentage of FTE

	Fall 2008			
	<i>N</i>	Mean # of Athletes	<i>N</i>	Mean % of Athletes to FTE
NCAA Division I and II	626	390.73	625	9.83%
NCAA Division III	414	379.47	414	21.00%
NAIA	274	209.99	274	20.59%
NJCAA & NCCAA	499	111.19	499	9.27%
Other	240	173.16	240	9.19%
Total	2053	270.96	2052	13.31%

Source: U.S. Department of Education, Equity in Athletics Disclosure Act

had significant presence of athletes, given the large percentage of students at the community colleges that are part-time. Of even greater interest is the growing percentage that athletes represent of full-time equivalencies in institutions with declining enrollments, suggesting a relationship between athletics and strategic enrollment management.

This study sought to address the growing need of institutions, particularly ones using athletics for enrollment management, to understand college-choice of student athletes. In particular, this study focused on community college athletes, a particularly under-researched population. College choice was couched in Perna's (2006) model, a blend of economic, sociological, and psychological constructs, embedding individual as well as institutional factors. The purpose of the study was to identify an instrument that could illicit choice behavior of student-athletes, reduce it to factors or constructs, identify which constructs most impacted college choice, and then determine whether factors could predict affirmation of choice of institution without the opportunity to engage in athletics and then choice of institution overall.

Survey methodology was used with data collected via an online survey. Descriptive and inferential statistics were used to analyze the data and make inferences about the relationship between factors and various demographic characteristics and then factors and reaffirmation of choice. Exploratory factor analysis was used to reduce the data from the survey into factors and non-parametric tests were used to look at differences between various demographics. Finally, binary logistic regression was used to see if responses on factors relative to choice could predict affirmation of choice of college. An alpha of .05 was used as the level of significance with SPSS as the software for the statistical analysis. This chapter

gives a summary of the major findings from the described analysis, addresses the limitations, and discusses implications for practice as well as areas for future research.

Findings

Research Question 1: What should a survey trying to evaluate college-choice of community college athletes entail?

Detailed research on reaffirmation of college choice requires gathering of information related to student background from an individual as well as cultural capital perspective, economic situation, and institutional factors exposed to the student. For athletes, this includes athletic aspirations, background, and athletic situational environmental factors of an institution. Second, true measures of potential cognitive dissonance require eliciting information relative to satisfaction of the variables impacting college choice.

Research Question 2: What are the background characteristics of student athletes that participated in this study?

Student athletes that participated did not represent the broad spectrum of athletes in terms of institutional type with Carnegie classification nor athletic conference. In addition, the participants did not represent the various regions of the country proportionally. However, from the colleges that agreed to participate, students came from a variety of distances to attend to school, participated in a broad range of sports, came from varying economic backgrounds, and brought different academic skill sets.

Research Question 3: What factors are associated with college choice of community college student-athletes?

Exploratory factor analysis identified ten factors or constructs from the 47 questions related to college choice. The factors aligned themselves intuitively and relative to prior

studies. The ten factors were named as described in Table 5.2. Factors one included questions relative to academic programs available, job placement rates, internship opportunities, academic facilities, and then social atmosphere, which could include clubs, etc. The second factor included questions strictly relative to the student-athlete: identification of his or her potential to “play,” for leadership opportunities, ability to transfer on to other institutions, etc. The third factor integrated opinions of peers, parents, openness of the campus, and then weather of the region. These seem to all be tangential features of a campus and then tertiary influences. The fourth factor was secondary team characteristics that included game schedules, uniforms, and team diversity. The fifth factor was team reputation and success: this included the win-loss record for the last two years and then the historical success of the team. These were measured from the student’s perspective. The sixth factor was high school influencers and prior experiences. These included the opinions of high school coaches, counselors, and then any and all prior experiences with a community college, which could include dual-enrollment, etc. The seventh factor was aid offered and tuition. The eighth factor was housing and campus life, which included social atmosphere again. The ninth factor was facilities and academic support for athletes. This included playing facilities, working-out or practice facilities, and then academic support programs for the athletes. The tenth factor was interactions with coaches and teammates, including both head as well as assistant coaches.

Across the board, one of the most influential factors was individual role on team and athletic goals. Other closely following factors also related to athletics. This suggests that community college athletic programs should understand the student-athletes strongly,

Table 5.2. Factor names

Number	Name
1	Academic Programs and Social Atmosphere
2	Individual Role on Team and Athletic Goals
3	Peers, Parents, Friendliness of Campus, and Weather
4	Secondary Team Characteristics
5	Team Reputation and Success
6	High School Influencers and Prior Experiences
7	Aid and Tuition
8	Housing and Campus Life
9	Facilities and Academic Support for Athletes
10	Interactions with Coaches and Teammates

strongly weight their potential opportunities on the team and then the importance of their individual future athletic goals. Student athletes seem very focused what is in it for me in terms of playing time, leadership potential, and ability to transfer on those skills.

Research Question 4: Are there differences, based on background characteristics, including gender, race and ethnicity, type of sport, distance from hometown, in the factors that influence college choice?

Factor responses were compared for significant differences between men and women, between minority students and non-minority students, and then between students from a hometown within 120 miles compared to students from a hometown beyond 120 miles. Males most influential factor was the individual role on the team and athletic goals (this was second for females). Females most influential factor was facilities and academic support for athletics. This factor, along with high school influences and prior experiences and then academic programs and social atmosphere were all significantly more important to females as males. These findings seem to align with prior research which suggested that there are

some differences between college-choice behavior of student-athletes based upon gender (Doyle & Gaeth, 1990; Goss, Jubenville, & Orejan, 2006; Johnson, Jubenville, & Goss, 2009) and affirms earlier findings that academic programs are of greater importance to female student-athletes than male student-athletes in the college search process (Doyle & Gaeth, 1990; Johnson et al., 2009).

There were no significant differences in the factor responses for minority and non-minority students; in fact, both groups had the same three top factors influencing choice with Individual Role on Team and Athletic Goals, Facilities & Academic Support for Athletes, and then Interactions with Coaches and Teammates as the top three factors in order. In fact, most of the factors ranked very similarly for both groups indicating that minority status did not impact significantly the factors influencing choice of the student-athletes participating in this survey. These findings confirm earlier research that found little difference in the college-choice factors of minority compared to non-minority student athletes (Harber, 2009; Johnson et al., 2009)

Distance did factor in as influencing choice. Again, Individual Role on Teams and Athletic Goals was the most influential factor. However, students with a hometown within 120 miles were significantly more likely to be influenced by Facilities & Academic Support for Athletes as well as Academic Programs and Social Atmosphere than students from further than 120 miles. These same students though with a hometown within 120 miles were significantly less likely to be influenced by Housing & Campus Life and High School Influencers and Prior Experiences than the students from further than 120 miles.

Research Question 5: Can a student-athlete's willingness to select a community college without the opportunity to play athletics (choosewithoutathletics) be reliably predicted from the knowledge of the importance of the factors influencing choice (Academic Programs & Social Atmosphere, Secondary Team Characteristics, Facilities and Academic Support for Athletes, Individual Role on Team and Athletic Goals, High School Influences and Prior Experiences,) distance from hometown (Q25), whether the student initiated contact with the community college athletic program (Q35), whether it was the student's first semester at the college (Q43), whether the student narrowed their choices based on athletics (Q4-10), and finally whether this community college was the student's first or second college choice (Q4-14)?

While the variance explained by the resulting forward logistic regression results was not ideal, six variables were statistically significant in predicting whether a student-athlete was willing to select a community college absent the opportunity to play athletics. With the conversations relative to eliminating sports due to budgetary constraints, it is important to understand the inherent opportunity costs associated with students who would not have chosen to attend a community college absent the opportunity to engage in intercollegiate athletics. The six variables predicting choice were: the role of High School Influences & Prior Experiences, Secondary Team Characteristics, distance from hometown, whether the student initiated contact with the community college athletic program, a student's Individual Role on Team & Athletic Goals, and whether it was the student's first semester at the college.

A few variables, whether it was the student's first semester at the college, distance from hometown, and whether the student initiated contact with the community college athletic program weigh in the efforts the student at securing an institution that proffered the option for intercollegiate athletics. Students that traveled further distances had lower odds of selecting the college, absent the opportunity to play sports. This was same for student's that

initiated contact or were in their first semester; first semester students and students initiating contact had lower odds of selecting the institutions absent the opportunity to play sports.

Students who placed a higher important on the individual role on team and athletic goals were also less likely to choose a college without the opportunity to engage in intercollegiate athletics. Students that are more influenced by high school counselors, peers, and prior experiences have greater odds of selecting a community college, even if they did not have the opportunity to engage in athletics. Finally, the model had an 86.3% average in correctly classifying student-athletes that would not have chosen this community college absent the opportunity to engage in athletics. From an enrollment management perspective, this is significant as it assists in identifying who would not have attended an institution without the institution's investment in athletics.

Research Question 6: Can a student-athlete's reaffirmation of choice of college (choicebinomial) be reliably predicted from the knowledge of the importance of the factors influencing choice (Academic Programs & Social Atmosphere, Team Reputation & Success, Secondary Team Characteristics, Housing & Campus Life, Facilities and Academic Support for Athletes, Aid & Tuition, Individual Role on Team & Athletic Goals,) distance from hometown (Q25), whether the student initiated contact with the community college athletic program (Q35), whether it was the student's first semester at the college (Q43), annual parental household income (Q39) and finally whether this community college was the student's first or second college choice (Q4-14)?

While the variance explained by the resulting forward logistic regression results was not ideal, four variables were statistically significant in predicting whether a student-athlete was willing to select their community college over again. Interestingly, Team Reputation and Success, Facilities and Academic Support for Athletes, Individual Role on Team & Athletic Goals, and whether the student initiated contact with the community college were significant predictors of a student's willingness to select an institution again. Thus, students

were twice as likely to reselect an institution for every increase in importance of Team Reputation and Success and student's were significantly less likely to select the same institution for every decrease in importance of his or her Individual Role on Team & Athletic Goals. Paramount in this finding is that all of the predictors relative to re-selecting an institution center around athletics and the search process of the student.

Implications for Practice

The study revealed multiple findings that should be of interest to community college athletic programs, including large established athletic programs as well as smaller budding athletic programs, including those in declining population areas. First, and foremost, academic programs available did not seem to be a substantial factor to the search process. Approximately 50% of the respondents in the survey indicated that their education goal was the Associate of Arts degree, generally a transfer friendly program. In addition, 80.4% overall indicated that their individual educational attainment goal was either a bachelor's degree or beyond, indicating that transferring on to a four year institution generally as in the educational plans.

Across the board, for these student-athletes, athletic factors ranked higher in factors of importance in the college search process. Approximately 50% of the participants had prepared statistics and/or film to send to colleges, and almost two-thirds of those who did had sent the film and/or statistics to this community college they were attending. Furthermore, 60.5% of the participants had initiated their contact with their community college's athletic program. In conclusion, the participants in this study were serious about intercollegiate athletics as a functional part of their college experience and factors related to their individual

opportunity to play, to start, and to lead were of utmost importance in their choice process. Furthermore, the team success was important to their ratification of their college choice.

With the growing trend of athletics sliding either under enrollment management or partnering with enrollment management, it is important to understand the messages that seem to trigger particular audiences. As mentioned, all segments valued the concept of the student athlete's role on the team. These athletes were not selecting a college because of conference, big school affiliation, etc. They were selecting a college because of the opportunity to engage in athletics. Academics were a given, but not the dominant factor in the selection of an institution except for females that found facilities and academic support for athletes, as well as academic programs, to be important in the search.

Ultimately, the question for community colleges centers around lifetime value of students and the logistic question did identify predictors of students that would not have attend the institutions absent the opportunity to play sports and then students that would select this institution again if they had to make that choice. Many of the factors influencing these decisions again focused on athletics and the efforts the student put into the search process. However, these athletes that will reaffirm their choice of institution also are the ones then that are connecting to the institutions, which theoretically should have great weight in predicting who will be alumni that connect then to the institution.

These implications are important to Perna's (2006) conceptual model. This model incorporated economic theory, sociological theory, and then psychological theory in mapping college choice behavior. Sociological theory incorporated the concept of cultural capital, a piece exhibited by students relative to athletics as students initiated contact with programs, prepared film and/or statistics, and had individual athletic goals. These variables had

predictive value when looking at affirmation of choice and factors that influenced choice. The psychological theory, the construct most overlooked in college choice literature, was pervasive in this study. Students looked at variables controlled by the institution, even those related to athletics. These included coaches, diversity on team, game schedule, opportunity to travel, team success, facilities and academic support for athletes, etc. The importance these dynamics carried or students indicate that a community college can manipulate or control particular influences that will impact students' decisions to engage in athletics at a community college. For community colleges in declining population areas or seeking to diversify student population base or change campus life, this is significant as there is grounding to validate that athletes choose a community seeking particular environments or experiences and the college can influence those environments or experiences (psychological influences) to draw student-athletes, even from outside its community college region.

Recommendations for Further Research

Several recommendations are suggested for future study. While the design originally intended to incorporate random sampling of institutions and the inclusion of a greater number of institutions, the researcher was not able to accomplish this and instead used convenience sampling, somewhat limiting the generalizability of the findings. In addition, the study incorporated an exploratory factor analysis. Ideally, the survey would be administered again to another group of institutions and community college athletes in order to perform confirmatory factor analysis and then to confirm the findings of this study.

The study also had a limited range of teams participating. Certainly there are differences between team sports compared to individual sports, and then between

traditionally revenue generating sports and non-revenue generating sports. Again, the study did not include sufficient diversity to test for differences between these groups.

The study also attempted to look at college choice and then satisfaction with choice as measured through reaffirmation. The survey did ask questions relative to importance of factors, engagement of student, and then satisfaction with factors. However, this analysis limited itself to looking at choice at time of choice and then connecting it to reaffirmation.

While the survey was constructed based upon prior research studies, most research on college choice of community college athletes has been quantitative. Balancing out research in this field should include some form of focus groups, narrative inquiries, or phenomenological studies to allow students' voices to be heard from a different perspective, in order to enhance, contradict, or validate the research and survey questions. Given the suggestion that athletics is used somewhat as an enrollment management tool, future research should look to the athletic directors and/or coaches, particularly those in population declining areas but with growing athletic programs to see what messages they hear from their institutions in terms of purpose of athletics.

Finally, as mentioned, much of the research completed in athletics has been around Division I and Division II athletics. Few have looked at the similarities or differences between the experiences, goals, college-choice behavior of athletes from the different divisions or leagues. How similar are the goals of the athletes at the community college level to the athletes of the Division III level? How different are the athletic experiences?

Conclusion

This study examined identified factors influencing college choice of student-athletes at the community college. Non-parametric tests were used to look for differences between segments in their factors influencing college choice and then binary logistic regression was used to predict which student athletes would not have attended their community college absent the opportunity to engage in athletics and then which student-athletes would select their institutions again if they could make their choice over. Results indicated that a student-athlete's perspective of his or her role on a team and then other athletic environmental factors weigh heavily in the college-choice process. The research also indicated that a significant portion of the athletes engaged in athletics at the community college would not have selected the institution but for the opportunity to play sports.

As discussed previously, the results of this study have important implications for institutional leaders looking at budgetary decisions, including the addition or elimination of athletic programs, at programs to draw different groups of student athletes, and then role of athletics on a campus. It appears that athletics does draw students to an institution that would not have otherwise chosen to attend a particular community college, affecting enrollment management.

APPENDIX. COMMUNITY COLLEGE STUDENT ATHLETE SURVEY

Rinke, Patricia

For each of the following factors, identify the degree of importance on your decision to attend your community college:

Factor	No importance	Slightly important	Moderately important	Very important	Did not experience or learn about during college search process
1. Head Coach	1	2	3	4	N/A
2. Assistant Coaches	1	2	3	4	N/A
3. Interaction with team members during college search process	1	2	3	4	N/A
4. Tradition and reputation of the athletic programs	1	2	3	4	N/A
5. Weight room and/or training facilities for athletes	1	2	3	4	N/A
6. Fields, courts, gyms or facilities for competition	1	2	3	4	N/A
7. Academic support for athletes	1	2	3	4	N/A
8. College's athletic conference	1	2	3	4	N/A
9. Game schedule	1	2	3	4	N/A
10. Potential to travel for tournaments or competition	1	2	3	4	N/A
11. Historical success of team	1	2	3	4	N/A
12. Team's previous two-year win/loss record	1	2	3	4	N/A
13. Potential to transfer to a competitive four year college athletic program.	1	2	3	4	N/A
14. Size of team roster	1	2	3	4	N/A
15. Diversity of team membership	1	2	3	4	N/A
16. Opinion of fellow high school teammates	1	2	3	4	N/A
17. Opinion of high school athletic coach	1	2	3	4	N/A
18. Potential for playing or competition time	1	2	3	4	N/A
19. Potential for leadership opportunity on team	1	2	3	4	N/A
20. Potential to be 'first string' or starter on team during first year	1	2	3	4	N/A
20. Potential to be starter or 'first string' before graduation	1	2	3	4	N/A

22.	Team uniforms and colors	1	2	3	4	N/A
23.	Distance of college to home	1	2	3	4	N/A
24.	College campus' size	1	2	3	4	N/A
25.	Academic programs available	1	2	3	4	N/A
26.	College's academic reputation	1	2	3	4	N/A
27.	High school counselor's opinions	1	2	3	4	N/A
29.	High school teachers' opinions	1	2	3	4	N/A
30.	Prior experience with this community college	1	2	3	4	N/A
31.	Housing options	1	2	3	4	N/A
32.	Community size where college is located	1	2	3	4	N/A
33.	Cultural activities available in campus town or area	1	2	3	4	N/A
34.	Social atmosphere of campus and/or community	1	2	3	4	
35.	Classroom facilities on campus	1	2	3	4	N/A
36.	Quality of residence life	1	2	3	4	N/A
37.	Opportunity for internships within major	1	2	3	4	N/A
38.	Preparation for transferring to another institution	1	2	3	4	N/A
39.	Job Placement rate	1	2	3	4	N/A
40.	Contacts with Admissions Office	1	2	3	4	N/A
41.	Campus Visit	1	2	3	4	N/A
42.	Tuition and fees for this institution	1	2	3	4	N/A
43.	Athletic Scholarship offered	1	2	3	4	N/A
44.	Non-athletic scholarships offered	1	2	3	4	N/A
45.	Financial Aid package offered	1	2	3	4	N/A
46.	Friendliness of the campus atmosphere	1	2	3	4	N/A
47.	Weather climate of the college community	1	2	3	4	N/A
48.	Parent(s) opinions on where I should attend college	1	2	3	4	N/A
49.	Friend(s) opinions on where I should attend college	1	2	3	4	N/A

Please mark your current level of satisfaction with the following factors: (These questions are for returning students)

	Factor	Very Dissatisfied	Somewhat Dissatisfied	Somewhat satisfied	Very Satisfied	Have not experienced or have no knowledge of yet.
1.	Relationship with head coach	1	2	3	4	N/A
2.	Interaction with team members	1	2	3	4	N/A
3.	Weight room and/or training facilities for athletes	1	2	3	4	N/A
	Fields, courts, gyms or facilities for competition					
4.	Relationship with assistant coach(es)	1	2	3	4	N/A
5.	Athletic conference	1	2	3	4	N/A
6.	Game schedule	1	2	3	4	N/A
7.	Potential to travel for tournaments	1	2	3	4	N/A
8.	Team success during your time	1	2	3	4	N/A
9.	Leadership of head coach	1	2	3	4	N/A
10.	Potential to transfer to four-year college athletic program	1	2	3	4	N/A
11.	Size of team	1	2	3	4	N/A
12.	Diversity of team membership	1	2	3	4	N/A
13.	Playing time	1	2	3	4	N/A
14.	Potential for leadership opportunity on team	1	2	3	4	N/A
15.	Role on team during first year	1	2	3	4	N/A
16.	Potential to be starter or 'first string' before graduation	1	2	3	4	N/A
17.	Scholarship dollars or financial aid package related to athletics	1	2	3	4	N/A
	Scholarship dollars or financial aid package overall	1	2	3	4	N/A
18.	Team uniforms and colors	1	2	3	4	N/A
19.	Distance of college to home	1	2	3	4	N/A
20.	College's size	1	2	3	4	N/A
21.	Academic programs available	1	2	3	4	N/A
22.	College's academic reputation	1	2	3	4	N/A
23.	Housing options	1	2	3	4	N/A
24.	Community size of the campus town/area	1	2	3	4	N/A
25.	Cultural activities within the campus area	1	2	3	4	N/A
26.	Classroom facilities	1	2	3	4	N/A
27.	Quality of residence life	1	2	3	4	N/A

28.	Opportunity for internships within major	1	2	3	4	N/A
29.	Preparation for transferring on to four-year college.	1	2	3	4	N/A
30.	Social Atmosphere at this college	1	2	3	4	N/A
31.	Job Placement rate	1	2	3	4	N/A
32.	Relationship with academic advisor	1	2	3	4	N/A
33.	Relationship with faculty	1	2	3	4	N/A
34.	Rigor within coursework	1	2	3	4	N/A
35.	Academic support for athletes	1	2	3	4	N/A
36.	Quality of the faculty	1	2	3	4	N/A
37.	Friendliness of the College Atmosphere	1	2	3	4	N/A

These are for returning students only

	Please indicate your agreement with the following statements:	Never	Rarely	Usually	Always
1.	During a typical semester, how frequently do you prepare for class by completing assigned readings before class?	1	2	3	4
2.	During a typical semester, how frequently do you turn in your assignments late or not at all?	1	2	3	4
3.	During a typical semester, how frequently do you give your best efforts on preparing your assignments?	1	2	3	4
4.	During a typical semester, how frequently do you attend class (exclude absences due to serious illness, school related activities)?	1	2	3	4
5.	During a typical class session, how frequently do you surf the internet, text on your cell phone, study for other courses, or listen to music?	1	2	3	4
6.	During a typical semester, how frequently do you have a class that requires you to write a paper exceeding 10 pages?	1	2	3	4
6.	During a typical semester, how frequently do you have a class that requires you to write a paper between 5 – 10 pages?	1	2	3	4
7.	During a typical semester, how often do you study with peers or in study groups?	1	2	3	4
8.	During a typical semester, how frequently do you meet your professors outside of class during office hours?	1	2	3	4
9.	During a typical semester, how frequently do you participate in class discussion?	1	2	3	4
10.	During your academic career at this institution, how frequently have you utilized campus tutoring or support services?	1	2	3	4
11.	During a typical semester, how frequently do you attend non-athletic campus events such as plays, concerts, speakers, etc.?	1	2	3	4
12.	During a typical semester, how frequently do you participate in non-athletic clubs or groups on campus?	1	2	3	4

Please respond to the following statements: THESE ARE FOR ALL STUDENTS

Statement	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree	No opinion
1. I try to find courses to take that will be challenging for me.	1	2	3	4	N/A
2. I would have chosen this community college even if I did not have the opportunity to participate in athletics.	1	2	3	4	N/A
3. My academic program is available at most other community colleges.	1	2	3	4	N/A
4. I would have chosen this community college and played athletics here even if my initial choice of academic program was not offered.	1	2	3	4	N/A
5. If I could make my college choice again, I would choose to play intercollegiate sports at this college.	1	2	3	4	N/A
6. My community college is a challenging academic institution.	1	2	3	4	N/A
7. Intercollegiate athletics have been a strong academic motivator for me.	1	2	3	4	N/A
8. When I started at my community college, I was more athlete than student.	1	2	3	4	N/A
9. I used athletics as a way to finance my higher education.	1	2	3	4	N/A
10. I narrowed my potential choice of colleges based upon where I could engage in intercollegiate athletics.	1	2	3	4	N/A
11. I wish I had played sports at a four-year college.	1	2	3	4	N/A
12. Athletics at my community college have been more demanding than I anticipated.	1	2	3	4	N/A
Academics at my community college have been more demanding than I anticipated.	1	2	3	4	N/A
13. My community college was my college of first or second choice to attend.	1	2	3	4	N/A
14. Most of my final college choices offered me the chance to engage in intercollegiate athletics.	1	2	3	4	N/A
15. Financial pressures influenced my decision to attend the community college over a four-year college.	1	2	3	4	N/A
16. There are an increasing number of students who attend the community college to get their required courses done before transferring.	1	2	3	4	N/A
17. If I could make my choice to select my college again, I would still choose this community college.	1	2	3	4	N/A

NEXT FOUR ARE FOR RETURNING STUDENTS ONLY

Number of hours per typical week during season in practice, training, and competition	0 hrs per week	1-5 hours per week	6-10 hours per week	11-15 hours per week	16-20 hours per week	21-25 hours per week	25+ hours per week	
Number of hours per typical 'out of season' week practicing and training practice and training	0 hrs per week	1-5 hours per week	6-10 hours per week	11-15 hours per week	16-20 hours per week	21-25 hours per week	25+ hours per week	
Number of hours per typical week studying for class:	0 hrs per week	1-5 hours per week	6-10 hours per week	11-15 hours per week	16-20 hours per week	21-25 hours per week	25+ hours per week	
Number of hours per typical week working at job	0 hrs per week	1-5 hours per week	6-10 hours per week	11-15 hours per week	16-20 hours per week	21-25 hours per week	25+ hours per week	
These below are for all students								
Background information Gender: M F Age: _____								
Total number of colleges attended, including this college (exclude credits earned during high school):	1	2	3	4	5 or more			

My hometown community size		Small town (<5000)	Midsized town (5100-30,000)	Large town (31,000-70,000)	Smaller Urban area (70,001-150,000)	Metropolitan area (150,001 or over)		
----------------------------	--	--------------------	-----------------------------	----------------------------	-------------------------------------	-------------------------------------	--	--

Distance from my hometown community to my community college campus.	<6 miles	6-10 miles	11-30 miles	31-120 miles	121-200 miles	201-500 miles	Farther than 500miles but within the U.S.	From outside the United States
State of Legal Residence or if from outside the United States, country of hometown community								
Primary sport I participate in –								
Baseball	Wrestling	Softball	Basketball	Soccer	Volleyball	Cross County		
Track	Football	Competitive Dance	Golf	Rodeo	Swimming	Other: _____		
Secondary sport, if any, I participate in –								
Baseball	Wrestling	Softball	Basketball	Soccer	Volleyball	Cross County		
Track	Football	Competitive Dance	Golf	Rodeo	Swimming	No secondary sport	Other: _____	
Race/Ethnicity	American Indian or other Native American Asian, Asian American, or Pacific Islander Native Hawaiian Black or African American White or Caucasian Hispanic, Latino, or Spanish Other							
High School Education	Graduate	Did not graduate, but completed GED	Did not graduate, but working towards GED	Did not graduate and not working towards GED				
Years of math successfully completed in high school.	Less than 1 year	1 – 1.5 years	2 – 2.5 years	3 – 3.5 years	4 years			
High School GPA Average	1.0 or less	1.01 – 1.99	2.00-2.49	2.50-2.99	3.00-3.49	3.50-3.99	4.00 or above	
ACT Composite	Did not take	Score:____ —						
SAT Composite	Did not take	Score:____ —						

Did you take AP and/or Honors courses in high school?	Yes	No						
Did you earn credits in high school through dual enrollment/dual credit, by enrolling college while still in high school, or by some other means?	Yes	No						
Many community college students place into developmental or precollege level courses in reading, writing, and/or math. When you came to this community college, what were your placements in the following areas:								
Reading	Developmental	College-level	Don't remember	Didn't have placement				
Writing	Developmental	College-level	Don't remember	Didn't have placement				
Math	Developmental	College-level	Don't remember	Didn't have placement				
Number of credit hours registered for this semester	11 or less	12 -13	14-15	16-17	18	19+		
Current GPA at this college:	Below 2.0	2.0 – 2.5	2.51-3.0	3.01-3.5	Above 3.51			
For the primary sport you play at this college, how many years did you play (include high school participation) prior to the collegiate level?								
For the primary sport you play at this college, how many years did you engage in competitive (tournament, club or league) outside of school competition?								

Did you prepare film or written information with statistics on your athletic performance to send to colleges and/or recruiters?	Yes	No						
If you prepared film or written information, how many colleges did you send it to?								
If you prepared film or written information, did you send it to this community college that you are currently attending?	Yes	No						
Did you initiate contact with this college's athletic program?	Yes	No						
Athletic Goals	Finish my athletic career at this institutions	Transfer to a four-year institution and finish my athletic career there.	Transfer to a four-year institution and enter professional athletic competition from there.	Other athletic goals.				

Mother's Educational Attainment (circle answer)	High School or below	Some college	Associate's degree	Two-year plus additional college	Bachelor's degree	Master's level degree	Beyond one Master's degree	Do not know
Father's Educational Attainment (circle answer)	High School or below	Some college	Associate's degree	Two-year plus additional college	Bachelor's degree	Master's level degree	Beyond one Master's degree	Do not know
Annual Parental Household Income (circle answer)	<15,000	15,001-20,000	20,001-30,000	30,001-45,000	45,001-60,000	60,001-75,000	75,001-120,000	120,001+
What percentage of your direct academic costs								

(tuition, fees, textbooks, etc.) are paid by the following sources?								
You, the student	0%	1%-10%	11-25%	26-49%	50-74%	75-100%		
Parents	0%	1%-10%	11-25%	26-49%	50-74%	75-100%		
Academic Scholarship	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Athletic Scholarship	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Grants	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Loans	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Employer	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Other								

What percentage of your other college costs (housing, meals, transportation, etc.) are paid by the following sources?								
You, the student	0%	1%-10%	11-25%	26-49%	50-74%	75-100%		
Parents	0%	1%-10%	11-25%	26-49%	50-74%	75-100%		
Academic Scholarship	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Athletic Scholarship	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Grants	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Loans	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Employer	0%	1-10%	11-25%	26-49%	50-74%	75-100%		
Other								
Number of colleges visited before selecting this community college.	0	1-2	3-4	5-6	7-8	9+		
Number of four-year colleges visited.	0	1-2	3-4	5-6	7-8	9+		
Number of colleges offering you the opportunity to play intercollegiate athletics	0	1-2	3-4	5-6	7-8	9+		
Number of four-year colleges offering the opportunity to play intercollegiate athletics	0	1-2	3-4	5-6	7-8	9+		
Academic Goal at the community college	Certificate or Diploma	A.A.	A.A.S.	A.S.	Other two year degree	No degree sought	Other goals	Unsure at this time
Do you intend to transfer to another institution?	Yes	No	Unsure at this time					

If yes, do you intend to transfer to an institution where you will be able to continue participating in intercollegiate athletics?								
If yes, do you intend to transfer to a four-year institution?								
Size of High School Graduating Class	Less than 50	51-100	101-150	151-200	201-250	250+		
Open ended question – are there any other factors you would like to share that influenced your decision to attend this community college and/or participate in intercollegiate athletics?								

REFERENCES

- Adelman, C. (2006). A growing plurality: The “traditional age community college dominant” student. In *ASHE reader on community colleges* (pp. 405-410). Boston: Pearson Custom Publishing.
- Anctil, E. J. (Ed.). (2008). Selling higher education: marketing and advertising America's colleges and universities. *ASHE*, 34(2), 1-121.
- Ashburn, E. (2007). To increase enrollment, community colleges add more sports. *Chronicle of Higher Education*, 53(44), A31-A32.
- Athletics, C. o. (2009). *Welcome to the CCCAA*. Retrieved July 17, 2009, from California Community College Athletic Association: <http://www.coasports.org/about.asp>
- Barnes-Teamer, T. (2005). Student choice from the two-year perspective. *AACRAO 2005 Annual Meeting*. New York City.
- Bateman, M., & Spruill, D. (1996). Student decision-making: Insights from the college choice process. *College Student Journal*, 30 (2), 182-187.
- Baum, S., & Lapovsky, L. (2006). College Board publications. Retrieved 03 12, 2010, from www.collegeboard.com:www.collegeboard.com/prod_downloads/press/tuition-discounting.pdf
- Bennett, R., & Ali-Choudhury, R. (2009). Prospective students' perceptions of university brands: an empirical study. *Journal of Marketing For Higher Education*, 19(1), 85-107.
- Berson, J. S. (1996). Student perceptions of the intercollegiate athletic program at a community college. *Annual Convention of the National Association of Student Personnel Administrators* (pp. 1-26). Atlanta: ERIC.
- Beyer, J. M., & Hannah, D. R. (2000). The cultural significance of athletics in U.S. higher education. *Journal of Sport Management*, 14, 105-132.
- Botti, S., Broniarczyk, S., Haubl, G., Hill, R., Huang, Y., Kahn, B., et al. (2008). Choice under restrictions. *Market Letters*, 19, 183-100.
- Bush, V. B., Castaneda, C., Hardy, D. E., & Katsinas, S. G. (2009). What the numbers say about community colleges and athletics. *New Directions for Community Colleges*, 147, 5-13.
- Cain, M. S. (1999). *The community college in the twenty-first century*. Lanham, MD: University Press of America.

- Capraro, A. J., Patrick, M. L., & Wilson, M. (2004). Attracting college candidates: The impact of perceived social life. *Journal of Marketing for Higher Education*, 14(1), 93-105.
- Castaneda, C., Katsinas, S. G., & Hardy, D. E. (2005). *The importance of intercollegiate athletics at rural-serving community colleges*. Tuscaloosa: University of Alabama Education Policy Center, MidSouth Partnership for Rural Community Colleges.
- Chapman, D. W. (1981). A model of student college choice. *Journal of Higher Education*, 52(5), 490-505.
- Chapman, R. G. (1979). Pricing policy and the college choice process. *Research in Higher Education*, 10(1), 37-57.
- Chapterman, D. (1984). *Toward a theory of college choice: A model of college search and choice behavior*. Alberta, Canada: University of Alberta Press.
- Chressanthis, G. A., & Grimes, P. W. (1993). Intercollegiate sports success and first-year student enrollment demand. *Sociology of Sport Journal*, 10, 286-300.
- Clark, J. S., Apostolopoulou, A., Brandvold, S., & Synkowka, D. (2009). Who knows Bobby Mo? Using intercollegiate athletics to build a university brand. *Sport Marketing Quarterly*, 18(1), 57-63.
- College Choice and Access to College. (2009). *ASHE*, 1-140.
- Coughlin, M. (2005). Applied multivariate statistics. In M. Coughlin (Ed.), *Applications of intermediate/advanced statistics in institutional research* (pp. 169-213). Tallahassee, FL: Association for Institutional Research.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles: Sage.
- Dawes, P. L., & Brown, J. (2002). Determinants of awareness, consideration, and choice set size in university choice. *Journal of Marketing for Higher Education*, 12(1), 49-75.
- Dawes, P. L., & Brown, J. (2004). The composition of consideration and choice sets in undergraduate university choice: An exploratory study. *Journal of Marketing for Higher Education*, 14(2), 38-59.
- DesJardins, S. L., & Toutkoushian, R. A. (2005). Are students really rational? The development of rational thought and its application to student choice (Vol. XX, pp. 191-240). In J. Smart (Ed.), *Higher education: Handbook of theory and research* Norwell, MA: Springer.

- DesJardins, S. L., Ahlburg, D. A., & McCall, B. P. (2006). An integrated model of application, admission, enrollment, and financial aid. *Journal of Higher Education*, 77(3), 381-429.
- Dougherty, K. J. (2006). The community college: The impact, origin, and future of a contradictory institution. In B. Townsend, & D. Bragg (Eds.), *ASHE reader on community colleges* (3rd ed., pp. 75-82). Englewood Cliffs, NJ: Pearson.
- Doyle, C. A., & Gaeth, G. J. (1990). Assessing the institutional choice process of student-athletes. *Research Quarterly For Exercise and Sport*, 61(1), 85-92.
- Dumond, J., Lynch, A. K., & Platania, J. (2008). An economic model of the college football recruiting process. *Journal of Sports Economics*, 9(1), 67-87.
- Field, A. (2009) *Discovering statistics using SPSS*. Thousand Oaks, CA: Sage.
- Foster, J., Barkus, E., & Yavorsky, C. (2006). *Understanding and using advanced statistics*. Thousand Oaks, CA: Sage.
- Fountain, J. J. (2009). *An application of means-end theory to analyze the college selection process of female athletes at an NCAA Division II university*. Retrieved February 24, 2010, from The Sport Journal: <http://www.thesportjournal.org/article/application-means-end-theory-analyze-college-selection-process-female-athletes-ncaa-division>
- Garbert, T. E., Hale, J. L., & Montalvo, G. P. (1999). Differences in college choice factors among student-athletes. *Journal of College Admission*, 164, 20-29.
- Goff, B. (2000). Effects of university athletics on the university: A review and extension of empirical evidence. *Journal of Sport Management*, 14, 85-104.
- Goff, B. P. (2004). Preferred information sources of high school students for community colleges and universities. *Community College Journal of Research and Practice*, 28, 795-803.
- Goss, B. D., Jubenville, C. B., & Orejan, J. (2006). An examination of influences and factors on the institutional selection processes of freshmen student-athletes at small colleges and universities. *Journal of Marketing for Higher Education*, 16(2), 105-133.
- Groves, R., Fowler, F. J., Couper, M., Lepkowski, J., Singer, E., & Tourangeau, R. (2004). *Survey methodology*. Hoboken, NJ: Wiley.
- Hagedorn, L. S., & Horton, D. J. (2009). Conclusions and parting words from the editors. *New Directions For Community Colleges*, 147, 85-91.
- Hagedorn, L. S., & Horton, D. J. (2009). Editor's notes. *New Directions for Community Colleges*, 147, 1-4.

- Hamrick, F. A., & Stage, F. K. (2004). College predisposition at high-minority enrollment, low-income schools. *Review of Higher Education*, 27(2), 151-168.
- Harber, S. R. (2009). Race, interest convergence, and transfer outcomes for black male student athletes. *New Directions for Community Colleges*, 147, 29-37.
- Hemsley-Brown, J. (1999). College choice: Perceptions and priorities. *Educational Management Administration & Leadership*, 27, 85-98.
- History of the NAIA*. (2009). Retrieved July 17, 2009, from National Association of Intercollegiate Athletics: <http://naia.cstv.com/genrel/090905aai.html>
- Horton, D. J. (2009). Community college student athletes and academic success. *New Directions for Community Colleges*, 147, 15-27.
- Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 207-221.
- Hossler, D., & Stage, F. K. (1992). Family and high school experience influences on the postsecondary educational plans of ninth-grade students. *American Educational Research Journal*, 29(2), 425-451.
- Hossler, D., Schmit, J., & Wesper, N. (1999). *Going to college: How social, economic and educational factors influence the decisions students make*. Baltimore: John Hopkins University Press.
- Hu, S., & Hossler, D. (2000). Willingness to pay and preference for private institutions. *Research in Higher Education*, 41(6), 685-701.
- Intercollegiate Athletics: Four-year colleges' experiences adding and discontinuing teams*. (2001, March). Retrieved March 22, 2010, from General Accounting Office: <http://www.gao.gov/new.items/d01297.pdf>
- Iowa Department of Education. (2009). *The annual condition of Iowa's community colleges*. Des Moines: Author.
- Johnson, G. R., Jubenville, C., & Goss, B. (2009). Using institutional selection factors to develop recruiting profiles: Marketing small, private colleges and universities to prospective student athletes. *Journal of Marketing For Higher Education*, 19(1), 1-25.
- Judson, K. M., Gorchels, L., & Aurand, T. W. (2006). Building a university brand from within: A comparison of coaches' perspectives of internal branding. *Journal of Marketing for Higher Education*, 16(1), 97-114.

- Judson, K. M., James, J. D., & Aurand, T. W. (2004). Marketing the university to student-athletes: Understanding university selection criteria. *Journal of Marketing for Higher Education*, 14(1), 23-40.
- Kellaris, J. J., & Kellaris, W. K. (1988). An exploration of the factors influencing students' college choice decision at a small private college. *College and University*, 187-197.
- Kelpe Kern, C. W. (2000). College choice influences: Urban high school students respond. *Community College Journal of Research and Practice*, 24, 487-494.
- Kissinger, D. B., & Miller, M. T. (2009). The contemporary college student athlete as a subpopulation. In D. B. Kissinger, & M. T. Miller (Eds.), *College student-athletes: Challenges, opportunities, and policy implications* (pp. 1-7). Charlotte, SC: Information Age Publishing.
- Klenosky, D. B., Templin, T. J., & Troutman, J. A. (2001). Recruiting student athletes: A means-end investigation of school-choice decision making. *Journal of Sport Management*, 15, 95-106.
- Konnert, W., & Giese, R. (1987). College choice factors of male athletes at private NCAA Division III institutions. *College and University*, 33-44.
- Kotler, P., & Murphy, P. E. (1981). Strategic planning for higher education. *The Journal of Higher Education*, 52(5), 470-489.
- Kurlaender, M. (2006). Choosing community college: Factors affecting Latino college choice. *New Directions for Community College*, 7-15.
- Lawrence, H. J., Mullin, C. M., & Horton, D. J. (2009). Considerations for expanding, eliminating, and maintaining community college athletic teams and programs. *New Directions for Community Colleges*, 147, 39-51.
- Le Crom, C. W. (2009). *Factors contributing to student-athlete retention*. Retrieved December 4, 2009, from College Sport Research Institute: http://csri-jiaa.org/documents/puclications/research_articles/2009/JIAA_2009_2_Crom_Publish%20Copy_1.0.pdf
- LeCrom, C. W. (2009). Factors contributing to student-athlete retention. *Journal of Issues in Intercollegiate Athletics*, 14-24.
- Lee, J. W., Miloch, K. S., Kraft, P., & Tatum, L. (2008). Building the brand: A case study of Troy University. *Sport Marketing Quarterly*, 17 (3), 178-182.
- Letawsky, N. R., Schneider, R. G., Pedersen, P. M., & Palmer, C. J. (2003). Factors influencing the college selection process of student-athletes: Are their factors similar to non-athletes? *College Student Journal*, 37(4), 604-610.

- Litten, L. (1982). Different strokes in the applicant pool: some refinements in a model of student college choice. *Journal of Higher Education*, 53(4), 383-402.
- Maguire, J., & Lay, R. (1981). Modeling the college choice process: Image and decision. *College and University*, 123-139.
- Martin, N. &. (1991). Factors influencing students' college choice. *Journal of College Student Development*, 32, 253-256.
- Marx, J., & Huffmon, S. &. (2008). *The student-athlete model and the socialization of intercollegiate athletes*. Retrieved June 2009, from Athletic Insight: The Online Journal of Sport Psychology: <http://www.athleticinsight.com>
- Mathes, S., & Gurney, G. (1985). Factors in student athletes' choices of colleges. *Journal of College Student Personnel*, 327-333.
- McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. Albany: State University of New York Press.
- Mertler, C. A., & Vannatta, R. A. (2010). *Advanced and multivariate statistical methods*. Pyrczak Publishing.
- Milne, G. R., & McDonald, M. A. (1999). *Sport marketing: Managing the exchange process*. Sudbury, MA: Jones and Bartlett Publishers, Inc.
- Murphy, P. (1981). Consumer buying roles in college choice: parents' and students' perceptions. *College and University*, 140-150.
- National Junior College Athletic Association Home Page*. (2010). Retrieved April 4, 2010, from National Junior College Athletic Association Web Site: www.njcaa.org
- Neol-Levitz. (2007). *Why did they enroll? The factors influencing college choice*. Noel-Levitz.
- O'Connor, N. (2009). Hispanic origin, socio-economic status, and community college enrollment. *Journal of Higher Education*, 80(2), 121-145.
- Paulsen, M. &. (2002). Social class and college costs. *Journal of Higher Education*, 73(2), 189-235.
- Paulsen, M. B. (1990, May). *College choice: Understanding student enrollment behavior*. Retrieved 07 23, 2009, from *ERIC Digest*: <http://www.ericdigests.org/pre-9220/college.htm>
- Perna, L. W. (2006). Studying college access and choice: A proposed conceptual model. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 99-157). Norwell, MA: Springer.

- Pine, II, J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 97-105.
- Pitre, P. E. (2006). College choice: a study of African American and White student aspirations and perceptions related to college attendance. *College Student Journal*, 40(3), 562-574.
- Reid, J. S., Toncar, M. F., Jiang, Q., & Anderson, C. E. (2008). Different perceptions of recruitment efforts by academic college of students. *Proceedings of ASBBS*, 15, pp. 168-176.
- Robinson, M., & Miller, J. (2003). Assessing the impact of Bobby Knight on the brand equity of the Texas Tech basketball program. *Sport Marketing Quarterly*, 12(1), 56-59.
- Roy, D. P., & Graeff, T. R. (2008). Repositioning a university through NCAA Division I-A football membership. *Journal of Sport Management*, 22, 11-29.
- Sevier, R. A. (2000). Building an effective recruiting funnel. *Journal of College Admission*, 169, 10-19.
- Sevier, R. A. (1996). Those important things: What every college president needs to know about marketing and student recruitment. *College and University*, 71(4), 9-16.
- Shocker, A. D., Ben-Akiva, M., Boccara, B., & Nedungadi, P. (1991). Consideration set influences on consumer decision-making and choice: Issues, models, and suggestions. *Marketing Letters*, 2(3), 181-197.
- Smith, K., & Bers, T. H. (1989). Parents and the college choice decisions of community college students. *College and University*, 64(4), 335-348.
- Somers, P., Haines, K., Keene, B., Bauer, J., Pfeiffer, M., McCluskey, J., et al. (2006). Towards a theory of choice for community college students. *Community College Journal of Research and Practice*, 30, 53-67.
- St. John, E. P., Paulsen, M. B., & Starkety, J. B. (1996). The nexus between college choice and persistence. *Research in Higher Education*, 37(2), 175-220.
- Stinson, J. L., & Howard, D. R. (2008). Winning does matter: Patterns in private giving to athletic and academic programs at NCAA Division I-AA and I-AAA institutions. *Sport Management Review*, 11, 1-20.
- Sullivan, L. G. (2007). Preparing Latinos/as for a flat world: The community college role. *Journal of Hispanic Higher Education*, 6, 397-422.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate dtatistics* (Fourth ed.). Boston: Allyn and Bacon.

- Toma, J. D. (1999). The collegiate ideal and the tools of external relations: The uses of high profile intercollegiate athletics. *New Directions for Higher Education*, 105, 81-90.
- Toma, J. D., & Cross, M. E. (1998). Intercollegiate athletics and student college choice: Exploring the impact of championship seasons on undergraduate applications. *Research in Higher Education*, 39(6), 633-661.
- Townsend, B. K. (2003). The two-year college as a first choice, second chance institution for baccalaureate-degree holders. *Community College Journal of Research and Practice*, 27, 273-288.
- Vallerand, R. &. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology*, 11, 142-169.
- Vrontis, D., Thrassou, A., & Melanthiou, Y. (2007). A contemporary higher education student-choice model for developed countries. *Journal of Business Research*, 60, 979-989.
- Warwick, Jacquelyn, & Mansfield, P. M. (2004). Perceived risk in college selection: differences in evaluative criteria used by students and parents. *Journal of Marketing For Higher Education*, 13(1), 101-125.
- Welcome to *NCAAstudent.org*. (2009). Retrieved July 17, 2009, from NCAA student organization: <http://www.ncaastudent.org>
- Welki, A. (1987). The role of applicants' perceptions in the choice of college. *College and University*, 62(3), 147-161.
- Williams, M. B. (2008). Intercollegiate athletics at the community college. *Community College Journal of Research and Practice*, 32, 453-461.
- Williams, M. R., & Pennington, K. (2006). Community college presidents' perceptions of intercollegiate athletics. *The community college enterprise*, 12(2), 91-104.
- Wilson, R. (2008). A Texas team loads up on All-American talent, Without Americans. *Chronicle of Higher Education*, 54(18), A30-A31.
- Yankelovich, D., & Meer, D. (2006). Rediscovering market segmentation. *Harvard Business Review*, 84(2), 122-131.

ACKNOWLEDGMENTS

I am grateful to my major professor, Dr. Dan Robinson, for facilitating my progression and mentorship through the dissertation process. I am especially grateful to Dr. Frankie Laanan, for the time he gave the doctoral learning community students, and the encouragement to be the best and move into the role of a scholar. I am also appreciative of the support of my other committee members: Drs. Robyn Cooper, Larry Ebbers, and Mack Shelley.

Thank you, Judy Weiland, for taking care of and guiding “your” students through the university paperwork. Thank you, Pat Hahn, for your editing skills and diligence.