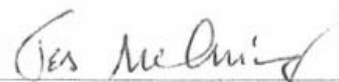


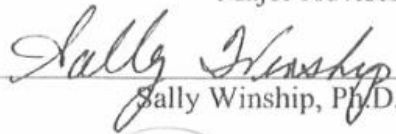
**The Enrollment Impact of Adding Intercollegiate Football at Private Non-Division I
Colleges and Universities.**

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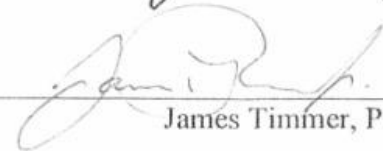
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Doctor of Education in Educational Leadership



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Abstract

Small, private colleges and universities have faced an existential crisis since the 2008 Great Recession. Changing demographics surrounding the number of high school graduates, intense pricing pressure, and attacks on the relevance of higher education have led to numerous closings and significant cuts at institutions from coast to coast (Huffman, 2013; Docking, 2015; Bransberger & Michelau, 2016). Renewed interest in community colleges and for-profit colleges along with the advent of honors programs at flagship public institutions have further eroded the student base from which many private schools draw for their entering classes (Callahan, 2014; Carlson, 2014). The development of new academic and athletic programs has been utilized to stem enrollment losses or to grow enrollment (Docking, 2015; Docking 2016; Bruder 2017). This study built upon the scholarship regarding non-Division I Colleges and the impact of athletics on enrollment by investigating the impact on first-year male enrollment at private, four-year colleges that added intercollegiate football between 2005 and 2014. This study examined both the change in the number of new male student enrollees and the variation in the gender balance of the freshman class of the institutions that added intercollegiate football. The results indicated institutions that added intercollegiate football grew new male student enrollments at a statistically significant level. In addition, a positive growth in the percentage of male students in the entering freshman class was realized at a statistically significant level by those institutions that added football. The interaction effect based on an institution's membership classification was not statistically significant for either new male student enrollment or gender balance. The study's results provide confirmation that

adding an intercollegiate football team can grow male enrollment and provide a greater percentage of male students in an entering freshman class.

Dedication

To Meredith, thank you for your unending support, encouragement, and gentle reminders to get the darn thing done. Your love has powered my writing and I am forever grateful for all you have done and put up with as I have completed this project. To my children, thank you for sharing your time with my project. Daddy will have more time for you now that this is completed.

Acknowledgements

There is no question that this dissertation is a labor of love and would not have been possible without the nurturing of Dr. Tes Mehring and Dr. Peg Waterman. Thank you for the time you have spent sending me hundreds of edits to make this study the best it can be. I am also indebted to many people who encouraged me along the way including my colleagues at Baker University including: Dr. Cassy Bailey, Dr. TLC, Dr. Pat Long, Dr. Susan Lindahl, Dr. Tony Brown, and Dr. Mark Bandre. Special thanks to my Green Truck Teammates, Andy Jett and Brian Blew, I am so glad we are crossing the finish line at the same time. The idea for this study was born out of my time at Hendrix College and the initiative put forth by Dr. Tim Cloyd. I'm proud to call him boss, mentor, and friend. Thanks for the call to come join your team at Drury University. Maybe we will use this study to add football at Drury. Additional thanks to Dr. Peter Mitchell who has mentored me during my time at Albion and beyond. To my admissions and enrollment mentors, thank you for sparking a passion that has turned into a career. Evan, Dan, David, and Doug thank you for your guidance, friendship and for the opportunity to grow as an enrollment professional. Finally, to my parents, for support, encouragement, and for taking me to college football games starting at age 8, even if I cheered for the wrong team that day.

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Chapter 1

Introduction

Pasternak and Levin's (1960) seminal coming of age movie told audiences *Where the Boys Are*, but as Bettis (2016) pointed out, the question for today is where the boys aren't. The answer is small private colleges and universities. Weaver-Hightower (2010) called the lack of males in higher education a "boy crisis" (p. 30). The National Center for Education Statistics (2019a) reported that in 2015 58.6% of college students at private, 4-year schools were female, up from 56.7% in 2005. Higher education leaders are exploring myriad options for increasing male enrollment such as adding new academic programs in Science, Technology, Engineering, and Math fields (Hoff Sommers, 2013), incorporating men's centers (Weaver-Hightower, 2010), and by differentiating recruitment tactics based on a student's gender (Marcus, 2017). By far, the most expedient way to boost male enrollment is by adding football. This sport can add as many as 100 new male students in just a few years (Belkin, 2016; Broughton, 2012; Pennington, 2006).

Higher education is in the midst of an unprecedented expansion of intercollegiate football not seen since football's early days on college campuses. For the two decades prior to 2018, colleges and universities have been adding football teams at a rate of almost seven per year (National Football Foundation, 2017). This follows a decade of decline in the 1990's when approximately the same number of colleges and universities dropped football (37) than added it (36) (National Football Foundation, 2017). Dunham (2007) shared the most often cited rationale for dropping football was to save money, but other reasons such as Title IX implications and lack of a winning program were also

given. The movement toward dropping football teams was a reversal of the trend witnessed in the 1980's during which a net plus of 30 institutions added intercollegiate football as 33 dropped and 63 added during this decade (National Football Foundation, 2017). Between 2000 and 2016, 30 institutions dropped intercollegiate football and 104 added the sport (National Football Foundation, 2017).

It is important to understand the contributing factors for the increase in the number of football teams, the motivations of education leaders adding intercollegiate sports, and the foundation for discerning the enrollment impact of adding these teams on institutional enrollment. College and university decision makers are employing strategic planning and enrollment management concepts to create gender balance and enrollment growth. Football success is not necessarily the panacea for enrollment growth, especially for non-Division I colleges and universities, but increased athletic opportunities are seen as a mode for stabilizing enrollment expectations.

Background

The perfect storm of challenging economic times (Corkery, 2013; Docking, 2015), declining numbers of high school graduates (Bransberger & Michela, 2016), and increased pressure to demonstrate the value of a college degree (Kiley, 2013) has presented tuition-driven colleges and universities with enrollment challenges unseen since the early 2000s. The Lawlor Group (2012) painted a picture of change for the next decade of higher education: "Administrators must come to the sobering realization that colleges and universities are in a historically challenging and potentially defining period" (para. 55). Docking (2015) argued there are "good reasons to worry about the financial future of small liberal arts colleges" (p. 9). The post-2008 great recession created new

and more significant financial challenges for institutions that derive the great majority of revenue through tuition. Quintana and Hatch (2017) reported 112 not-for-profit institutions failed the Department of Education's financial-responsibility test, providing further proof of the turbulent financial situation facing colleges and universities. Bransberger and Michelau (2016) documented the changing demographics of high school graduate projections. Whereas the total number of high school graduates increases through 2026 nationally, regional changes in the Midwest and Northeast, where many small, liberal arts colleges are located, face a much bleaker picture. Bransberger and Michelau stated, "the decline in the number of high school graduates in the Midwest and Northeast is projected to play out consistently year-over-year without pause" (p. 21).

Proactive higher education leaders who want to control the financial destinies of their institutions are exploring myriad approaches to growing revenues such as adding distance or online courses (Broussard & Outten, 2016), increasing auxiliary services, offering new short-term courses (Workman, 2014), or offering corporate training (Schulte, 2017). Yet the most often cited course of action is growing revenue from tuition with a focus on either growing net tuition revenue per student or gross net tuition revenue for an incoming class. Seltzer (2016) asserted the former is especially difficult as discount rates are climbing to historic highs and are leaving institutions struggling to enroll more students to increase gross net tuition revenue. Programmatic recruitment allows institutions to increase or stabilize enrollments (Beaver, 2014). One option is the addition of high demand majors such as engineering, nursing, and other health care fields (Crisp, 2015).

As higher education leaders search for avenues for enrollment growth, athletic recruitment is often considered the low hanging fruit as compared to adding academic programs (Associated Press, 2013; Docking, 2015; Miller & Fennell, 2015; Schaeperkoetter, 2017). For institutions with robust numbers of athletic teams, coaches have been encouraged to maximize their roster sizes. Institutions without a full slate of athletic teams are exploring the enrollment benefits of adding teams, often in emerging sports such as bowling, rowing, water polo, and men's volleyball (National Collegiate Athletic Association, 2012). Yet, as Pennington (2006) pointed out in a *New York Times* article:

Some small American colleges, eager to attract men to increasingly female campuses, have taken notice of how many students ... can be lured to attend by adding football teams. Officials at these colleges say football can bring in more tuition-paying students than any other course or activity — and not just players themselves. (para. 3)

Since Pennington's article was published, over 60 institutions have added or re-established football teams and the number continues to climb with at least eight more schools looking to add teams in 2018 and 2019 (National Football Foundation, 2017). Schools that have added football did so in an effort to address enrollment issues such as gender balance (i.e., male to female ratio) or overall student enrollment (Gardiner, 2010; National Football Foundation, 2011). Hendrix College in Arkansas reinstated football in 2013 and listed enrollment and resulting net revenue as the number one benefit of adding a football team in its football study report (Hendrix College Football Committee, 2008). Calvin College in Michigan, like Hendrix, completed an exploratory study and

listed “the likelihood of increased enrollment (males) and the subsequent financial gains that accompany increased enrollment” (Calvin College Football Feasibility Task Force, 2011, p. 4) as the top rationales for considering the addition of the sport.

Colleges and Universities that do not belong to the Division I classification have a number of similarities. Whereas most National Collegiate Athletic Association (NCAA) Division I institutions are either flagship public institutions (e.g., Ohio State University, University of California at Los Angeles, Florida State University, et al.) or well-endowed private institutions (i.e. Duke University, Stanford University, et al.), schools classified as members of the National Association of Intercollegiate Athletics (NAIA), National Christian College Athletic Association (NCCAA), or Division II and III members of the NCAA are often small private institutions or regional public institutions, often with smaller enrollments and smaller endowments. Non-Division I institutions often have small crowds for games, may not charge admission for events, and have limited, if any, media exposure (Bandré, 2011; Carroll, 2006; Huffman, 2013). The NCAA (2018) reported its members who are not a part of Division I demonstrate much higher percentages of athletes within their student bodies. However, it’s the smaller enrollments and smaller endowments that band non-Division I institutions together in their tuition revenue dependence. These tuition revenue needy institutions often require optimized enrollment to function financially.

Challenging economic times, along with changing demographics, have led colleges to “minimize uncertainty and adjust to shifts in the market” (Van Holm & Zook, 2016, p. 5). Webb (2014) argued,

Most major revenue sources have experienced dramatic fluctuations in the last decade. Excessive reliance upon any one of these sources may expose an institution to significant risk. Aware of this potential, administrators have increasingly begun to consider initiatives to improve the diversification of their institution's revenue portfolio. (p. 17)

Working to stabilize enrollments has meant colleges and universities have built in programmatic certainties like new sports teams or high demand academic programs.

Statement of the Problem

Pope and Pope (2009) and Beaver (2014) argued that true empirical work on the influence of athletics on the number of entering students for an institution is limited. Jones (2009) concurred, "The impact of college athletics on higher education is a complex issue. The relationship has many layers, many of which have yet to be explored by higher education scholars" (p. 19). Meanwhile, enrollment managers in institutions of higher learning say they have unused capacity. Schools are under-enrolled and can accept more students without increasing costs (Meyer & Sikkink, 2004). Bruder (2017) contended continued enrollment declines at small, private institutions have led campus leaders to seek alternative solutions to enrollment issues, including the addition of sports.

Currently, the scope of research on intercollegiate athletics and its relationship to enrollment is limited. The research that does exist, focuses mostly on NCAA Division I athletics. A special report from Hearn, Suggs Jr, and May-Trifiletti (2018) stated, "few broad-based studies have examined the evolution of colleges' athletic programming"

(p. 6). Huffman (2013) argued this sentiment as well in articulating that only a limited number of studies have documented the enrollment impact the addition of football has on non-Division I higher education institutions.

Purpose of the Study

The first purpose of this study was to discern the impact of adding intercollegiate football on first-year male student enrollment at non-NCAA Division I private colleges and universities between 2005 and 2014. A second purpose of the study was to determine differences in enrollment impact based upon an institution's membership classification: NCAA Division II, NCAA Division III, NAIA, or National Christian College Athletic Association (NCCAA). The third purpose of this study was to explore any changes to the gender balance at non-NCAA Division I private colleges and universities as a result of the addition of intercollegiate football. The final purpose of this study was to discern the impact of membership classification on the change in gender balance at non-NCAA Division I private colleges and universities.

Significance of the Study

This study contributed to the current literature related to the enrollment impact of adding intercollegiate football at NCAA, NAIA, and or NCCAA private colleges and universities. There has been limited examination of enrollment data from NCAA non-Division I institutions. The addition of football's impact on the gender balance of an institution is another area with limited studies found in the literature. Furthermore, there is a deficiency in the literature regarding broad based statistical research on the enrollment impact of adding intercollegiate football.

College and university presidents may be interested in the results of this study as they deliberate whether their institutions should explore adding intercollegiate football as a part of strategic initiatives to increase enrollment and more specifically, male enrollment. Athletic directors, enrollment professionals, and others interested in changing the athletic landscape or growing enrollments at their institutions may also be interested in the results of this study. Students may also be interested in the results of this study if they are advocating for the addition of intercollegiate football at their campuses. Finally, economic developers may want to use the findings from this study to measure how adding new sports teams may impact local communities.

Delimitations

Delimitations are “self-imposed boundaries set by the researcher on the purpose and scope of the study” (Lunenberg & Irby, 2008, p. 134). The delimitations in this study include:

1. Non-NCAA Division I institutions that have added football teams since 2005 to 2014 were included in this study.
2. Only private colleges and universities were included in this study.
3. Only two years of data were examined, the year prior to an institution adding football and the first year a football team was fielded by the college or university

Assumptions

According to Lunenberg and Irby (2008), assumptions are “postulates, premises and propositions that are accepted as operational for purposes of research” (p. 135). It was assumed institutions that added football maintained the team for at least two years beyond the first season in order to ascertain valid data. Further, it was assumed that

institutions accurately reported enrollment figures and the number of newly enrolled football players each year.

Research Questions

Lunenberg and Irby (2008) posited research questions are “critical components” and when combined with a well-designed theoretical framework, research questions “become a directional beam for the study” (p. 126). Four research questions guided this study.

RQ1. To what extent is there a difference in the change in first year male student enrollment between non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

RQ2. To what extent does membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, or NCCAA) impact the difference in the change in first year male student enrollment between Non-Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

RQ3. To what extent is there a difference in the gender balance of an institution between NCAA Division II, NCAA Division III, and NAIA or NCCAA colleges and universities that added intercollegiate football and those that did not add football during the same period?

RQ4. To what extent does membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, or NCCAA) impact the difference in the gender balance for non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

Definition of Terms

The following definitions offer brief descriptions of terms and idioms used in enrollment management. Additionally, many of these terms are used in conjunction with intercollegiate athletics. Finally, definitions for expressions often utilized in higher education are also included.

Enrollment management. Hossler (2000) defined enrollment management as the coordinated efforts to influence the size, shape, and characteristics of a student body through the direction of student marketing and recruitment as well as pricing and financial aid.

Strategic enrollment management. Dolence (2018) described strategic enrollment management as the data-informed process that aligns an institution's fiscal, academic, co-curricular, and enrollment resources with its changing environment to accomplish the institution's mission and ensure the institution's long-term enrollment success and fiscal health

National Collegiate Athletic Association (NCAA). The 1123 members of this organization are dedicated to the well-being and lifelong success of college athletes. Currently, members are divided into three divisions based upon common philosophies about competition and opportunity in intercollegiate athletics (NCAA, 2018).

NCAA Division I. Division I institutions offer scholarship aid for athletic ability throughout all sponsored sports and have the highest average athletic budgets (\$65.9 million per Football Bowl subdivision school). This is the highest level of sanctioned athletics in the NCAA (NCAA, 2018).

NCAA Division II. Division II institutions place less emphasis on intercollegiate sports through smaller scholarship allocations and fewer sports offerings. Division II athletes represent 9% of their respective institutional student bodies on average. There is a fairly equal mix of public and private institutions in Division II (NCAA, 2018).

NCAA Division III. The largest of the three divisions in terms of the number of members, Division III institutions, do not offer any financial assistance on the basis of athletic prowess. A great majority of Division III institutions are small (median enrollment is 1,766), private institutions, although there are a few public institutions included in this division. Roughly 1 in 6 students at a Division III institution participates in intercollegiate athletics and athletes at Division III schools graduate at a higher rate than their scholarship school peers (NCAA, 2018).

National Christian College Athletic Association (NCCAA). This term refers to a 94-member organization of faith based institutions that use athletic competition as an integral component of education, evangelism, and encouragement. This association allows for dual memberships as some institutions also belong to NAIA, Division II or Division III associations as well (NCCAA, 2017).

National Intercollegiate Athletic Association (NAIA). The NAIA is the governing body for a collection of small colleges and universities who believe in character driven education and the proper balance between athletics and education. With just over 250 members, the NAIA is significantly smaller than the NCAA and many schools are similar in size to Division III institutions, but NAIA schools may offer scholarships for athletic ability similar to Division II institutions (NAIA, 2017).

Title IX. According to the NCAA (2018), Title IX refers to one regulation in the 1972 Education Act that requires all higher education institutions who receive federal financial aid to not exclude from participation, denied the benefits of, or discriminate against students on the basis of sex. In intercollegiate sports it usually is referred to as the requirement for institutions to show a continuous history of supporting women's athletics or having a similar ratio of male to female athletes compared to the makeup of the entire student body.

Organization of the Study

Chapter 1 provided the background, statement of the problem, and purpose of the study. The significance of the study, delimitations, assumptions, research questions, and a lexicon of terms used throughout the study were also provided in Chapter 1. Chapter 2 offers a review of the relevant literature concerning enrollment management, the history of the addition of intercollegiate football in the modern era, and pertinent theories related to why football is seen as the sport with the potential for the largest impact on enrollment. Chapter 3 explains the methodology used in the study, including the description of the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and limitations of the study. The results of the hypothesis testing are presented in the fourth chapter. Finally, Chapter 5 provides an interpretation of study findings, relates the results to the literature, and provides suggestions for action and recommendations for future research

Chapter 2

Review of the Literature

The purpose of this literature review is to provide the contextual framework and an “analytical synthesis” (Ridley, 2012, p. 5) for the research included in the current study. This chapter summarizes related theories and research connected to the addition of intercollegiate athletics, especially football, for enrollment growth purposes. In addition, conceptual thinking related to strategic enrollment management is reviewed. The literature is organized into categories that summarize cogent concepts and theories including:

- Strategic enrollment management
- Reasons for declining male enrollment in colleges and universities
- The Historical background of the addition of football at the college level
- Rationale for colleges and universities to add intercollegiate athletics
- Rationale for football over other intercollegiate athletic teams
- The lack of a ‘Flutie Effect’ for institutions who do not offer NCAA D1 football
- A comparison of two internal studies completed by a college which ultimately added football and one that as of 2018 has not added football.

Strategic Enrollment Management

Jack Maguire is commonly credited with coining the term enrollment management (Black, 2001; Dennis, 2014; Hill, 2016; Hossler, 2000; Williams, 2003). This term describes a synergistic approach to enrollment planning. Maguire was a professor of physics who evolved into a college admissions expert when he applied scientific analysis to the area of college admission. Maguire defined enrollment

management as “a process that brings together often disparate functions having to do with recruiting, funding, tracking, retaining and replacing students” (Hill, 2016, para. 3). The idea of using data to inform decisions was a fundamental building block of this emerging field which eventually led to the creation of databases and customer relationship management software (Hill, 2016; Johnson, 2000).

Hossler and Bean (1990) also developed a definition of enrollment management: “efforts to influence the characteristics and size of enrolled student bodies by directing the activities of the offices of admissions, financial aid, new-student orientation, career planning and a number of other student affairs offices” (p. xiv). The authors further posited the need for institutional research and a systems approach to ensure data remains at the core of enrollment efforts.

Larson (2013) summarized Maguire’s key points in regard to the fundamentals of enrollment management:

- “Admissions should use marketing strategies” (para. 6)
- “Data matters” (para. 7)
- “Market analysis is essential” (para. 8)
- “Financial Aid is a recruitment tool” (para 9)
- “Retention is an enrollment tool” (para. 10)

These ideas, considered new in 1976 when Maguire first introduced them, have been embraced by enrollment managers for more than five decades. At many campuses, the individual charged with implementing these five points has the title of Dean of Admissions or Vice President of Enrollment Management. Hossler, Kalsbeek, and Bontrager (2015) pointed out that in some instances, at larger universities, this role can be

larger than one administrative unit and thus requires an “open system environment” (p. 5), that is, an organization which spans several departments, but with mutually agreed upon goals and operating procedures.

Enrollment management was born out of necessity as falling numbers of high school graduates increased the competition for new students. A scientific, data driven approach was necessary for colleges and universities to survive the decline in high school graduates. Greater marketing efforts and other enrollment management tactics more than offset the decline in the number of graduates as overall college attendance grew from 1976 to 1986 and beyond (Bransberger & Michelau, 2016; Snyder, 1993; Statista, 2018). Black (2001) argued, “applying the enrollment management lens enables the institution to see its students from a wider more comprehensive, angle” (p. 14). Ultimately, enrollment management is a holistic and data driven approach to the student life cycle.

Strategic enrollment management (SEM) represents the natural progression of the enrollment management field. Whereas enrollment management included the offices of admissions, financial aid, and marketing, SEM brought student affairs and academic affairs into the fold (Johnson, 2000). Black (2001) described the significant connection between strategic planning and enrollment management, “the very language of strategic planning in opposition to long-range planning provides enrollment management with the flexibility and process orientation that will be a springboard to greater and more significant change” (p. 15).

Dolence’s (2018) primer on SEM defined the field as “a comprehensive process designed to achieve and maintain the optimum recruitment, retention and attainment of students where optimum is defined within the academic context of the institution” (para.

4). He later added the concept of the “strategic position of an institution within the marketplace” (para. 5) to his definition. Dolence also posited the idea of SEM being conditional due to differing markets. What would be strategic for one institution would not necessarily be strategic for another.

Kalsbeek and Hossler (2009) defined SEM as “a process where desired enrollment outcomes are achieved through the orchestration of several core functions of an institution including marketing, recruitment, admissions, pricing and aid, retention programs, academic support and program development” (p. 4). Strategic enrollment management requires stakeholders from across a college campus to engage in the process of building a recruitment and retention plan. As Shanken (2017) asserted, “The ever-changing market place can have dramatic impacts on individuals and their communities. Rather than the institution becoming subject to external events by happenstance, comprehensive environmental scanning is essential” (p. 3). SEM often creates an environment of collaboration which can allow an institution to influence its future.

Ruffalo Noel Levitz (2018), an enrollment management consulting company, confirmed SEM as a “data informed process that aligns an institution’s fiscal, co-curricular, and enrollment resources with its changing environment to accomplish the institution’s mission and ensure the institutions long-term enrollment success and fiscal health” (para. 3). Recognizing changing environments through data analysis is a hallmark of SEM and allows an institution to set measurable goals through long range planning. SEM promotes student success by cultivating an environment focused on the life cycle of a student including recruitment, retention, and graduation. The creation of strategies, tactics, and policies to support this life cycle requires input and participation

from many different offices across a college campus. Johnson (2000) confirmed SEM “epitomizes the true spirit of the benefits of a team effort” (p. 13).

Dolence (2018) proclaimed SEM is about establishing the value of specific recruitment activities such as strategic positioning, marketing efforts, operations, and more. Green (2018) agreed with Dolence, but further stated the purposes of SEM are to establish goals consistent with an institutions mission, create a data-rich environment to render decisions and assess strategies, and reinforce communications and collaboration among departments throughout campus. Strategic enrollment management succeeds when it creates campus wide collaboration and active partnerships between different administrative divisions.

Strategic enrollment management has grown more complex over time and the consequences are also greater. Hossler et al. (2015) asserted enrollment concerns must be at the forefront of institutional planning and policy. These authors also argued, “a SEM perspective is therefore increasingly relevant to every aspect of institutional strategy and decision making” (p. 5). The authors continued to state SEM issues must be shared beyond leadership teams and must include other stakeholders such as the faculty, staff, and even the boards of colleges and universities. The complex nature of student enrollment can be explained with a few graphs and charts, but ultimately the process, decisions, and reactions must be shared in detail to inculcate a culture of strategic enrollment management. By completing research and considering campus culture and mission, a SEM based institution can be responsive to the market place and add the programs, academic or otherwise, that will ensure the optimum enrollment consistent with the mission and vision of the institution.

Strategic enrollment management and the mission of an institution must work hand in hand. The SEM process can certainly provide information to allow a college or university to more deeply examine its mission and even to change it if the data warrant a modification. SEM should be a principal element of an institution's strategic plan.

Deciding to add intercollegiate football is not a decision to enter into lightly. An informed SEM process and especially the data-rich research around it, can determine whether or not adding football would be consistent with an institution's mission or if it requires a change in mission.

Reasons for Declining Male Enrollment in Colleges and Universities

Male enrollment at private, four-year colleges increased in real numbers between 1985 and 2015 as seen in Table 1, however, as a percentage, more females attended these types of institutions at the end of this time frame.

Table 1

Private, Four-Year College Undergraduate Enrollment by Gender from 1985 to 2015

Year	Male	Female	Male Percentage	Female Percentage
1985	1,259,403	1,247,026	50.2	49.8
1990	1,304,523	1,425,789	47.7	52.3
1995	1,021,100	1,306,993	43.9	56.1
2000	1,471,451	1,837,009	44.4	55.6
2005	1,251,893	1,710,515	42.2	57.8
2010	1,604,899	2,306,646	41.0	59.0
2015	1,509,196	2,106,600	41.7	58.3

Note: Adapted from the *Digest of Educational Statistics*, National Center for Educational Statistics, 2019a.

Myriad reasons exist for this change, but it's even more dramatic when looking at overall college attendance rates of males and females. Table 2 details the significant decrease in male enrollment in higher education, along with a slight increase during the range of years included in the current study.

Table 2

Enrollment by Gender in All 2-Year and 4-Year Institutions from 1985 to 2015

Year	Male Percentage	Female Percentage
1985	47.5	52.5
1990	45.5	54.5
1995	44.4	55.6
2000	43.8	56.2
2005	42.6	57.4
2010	43.0	57.0
2015	43.6	58.3

Note: Adapted from the *Digest of Educational Statistics*, National Center for Educational Statistics, 2019a.

The reasons for a lower percentage of males attending college include efforts by colleges and universities to encourage more women to study different fields, childhood disadvantages impacting boys more than girls, rising expectations for girls, and boys perceptions about the value of college (Goldin, Katz and Kuziemko, 2006; Ewert, 2012; Vedder, 2015; Marcus, 2017; Semuels, 2017). Semeuls (2017) stated that women often earn higher grades than men and subsequently graduate at a higher rate, while “men’s enrollment and graduation rates have remained flat” (para. 5). Vedder (2015) articulated that his institution had a “Women in Science initiative, but not a Men in Science one” (para. 7) thereby pointing out extra encouragement for women, but not men, could be contributing to a lower percentage of men. Marcus (2017) also spoke to the gender issue

when quoting Patrick Maloney, “There’s a lot of attention on empowering girls. I’m not saying there is anything wrong with that, but males are the ones in crisis in education” (para. 30).

Goldin et al. (2006) argued a variety of factors influence the higher number of females in colleges and universities including a rising average age of marriage for women, increased use of birth control which allowed women to better plan their lives, and behavioral factors. Riseman (2016) concurred with the behavioral issues cited by Goldin et al. (2006), noting boys mature more slowly than girls and lack the same social skills. In addition Riseman noted, “ADHD, dyslexia, and other learning disabilities are more frequent in males” (para. 3). Finally, there are economic reasons which help explain lower rates of male college attendance. Marcus (2017) reported that some boys perceived little benefit in attending college when they can find jobs that pay as much or more than a post-college job. Marcus (2017) described this view as the, “economic despair of seeing little hope for financial advancement” (para.12).

Economic factors, rising expectations for females, and later marriage ages have impacted male enrollment at colleges since the 1980’s. Colleges were a male majority enterprise until 1995 when the balance tipped female. Institutions could either consider preferential admission practices for men (Ewert, 2012), which has academic integrity implications, or seek new ways of attracting males.

The Historical Background of Colleges Adding Football

Since the National Football Foundation started tracking the addition of intercollegiate football teams in 1968, 251 institutions have added football to their athletic offerings (National Football Foundation, 2016). After a decade of slower growth,

the 2000's have seen a return to a robust number of institutions adding intercollegiate football, with progressively more teams being added in each five-year period studied.

Table 3 summarizes data for the number of new football teams from 1970 through 2015 and includes data points for non-D1 schools adding football in the same time span.

Table 3

New Intercollegiate Football Programs by Year Teams Were Added

Year Started	New Football Teams Added	
	All Divisions	Non-Division I teams
1970-1974	41	30
1975-1979	23	15
1980-1984	23	22
1985-1989	40	37
1990-1994	18	17
1995-1999	12	11
2000-2004	27	24
2005-2009	29	27
2010-2014	37	35
2015-current	11	11

Note. Adapted from *Add or Resumed Programs Since 1968*, by the National Football Foundation, 2016, p. 3.

The reasoning behind each institution's rationale for adding football varied. However, the National Football Foundation (2017) asserted, "all of the decision makers who helped develop a plan for launching a program explain that an in-depth study played a critical role" (p. 2). Furthermore, "small colleges may cite increasing enrollment and addressing gender imbalances while larger universities might highlight the role of

football in raising the institutions profile and its ability to attract research grants (National Football Foundation, 2017, p. 2).

The growth of football teams can be seen from coast to coast. However, the greatest numbers can be found in the South and Texas (National Football Foundation, 2016, p. 3). Institutions from Southern states have added 25 of the 69 teams from 2005-2014 and schools from Texas comprised seven of the added teams (National Football Foundation, 2016, p. 3). The Great Lakes and Middle Atlantic regions added 10 teams each (National Football Foundation, 2016, p. 3). Bailey (2011) argued that one reason why football has seen greater growth in the South is because “football is an important aspect of southern society” (p. ii).

Teams were added across all divisions. However, only 14 of the teams added have been at the D1 level, either in the Football Bowl Subdivision (four teams) or Football Championship Subdivision (ten teams). The NAIA has added 22 teams, while the NCAA Division III added 19 programs. Table 4 summarizes the classification, division and geographic region of each of the colleges or universities that have added football programs between 2005 and 2015.

Table 4

Football Teams Added Between 2005 and 2015 by Classification, Division, and Location

Region	NCAA			NAIA	NCCAA	Total
	Division I	Division II	Division III			
Great Lakes	0	2	2	6	0	10
Mid Atlantic	1	2	4	2	1	10
Middle States	0	1	1	5	0	7
New England	0	1	5	0	0	6
South	8	3	4	7	3	25
Texas	5	0	1	1	0	7
West	0	1	2	1	0	4
Total	14	10	19	22	4	69

Note. Adapted from *Add or Resumed Programs Since 1968*, by the National Football Foundation, 2016, p. 3.

Feezell (2009) argued larger schools choose to add football for university advancement purposes as it is a favorite spectator sport. Conversely, Feezell stated smaller schools see the “purpose of athletics is to attract students who desire to continue competing, thus enabling the institution to more readily reach enrollment targets” (p. 67). Dunham (2007) found that “athletic administrators cited the desire to increase enrollment as a factor behind the decision (to add football) more than any other single factor (p. 38). Miller and Fennel (2015) reported new sports teams and facilities, especially football and marching bands, often boost enrollment. Archie Manning, Chairman of the National Football Foundation concurred, “Many of these colleges recognize that football can play an important role in encouraging students to continue their educations by enticing them to enroll (National Football Foundation, 2017, p. 2).

Callahan (2014) discovered that in the case of Notre Dame College in Ohio, “the addition of football as a varsity sport had the greatest impact (on enrollment). Football immediately increased our enrollment by 150 (students)” (p. 111). According to the NFF (2017) Manning also asserted there is still room for expansion at the collegiate level as there are “more than one million high school students playing football and more than 70,000 spots on college teams” (National Football Foundation, 2017, p. 2). Eight programs were slated to begin in 2018 from Maine to Arizona.

Rationale for Colleges and Universities to Add Intercollegiate Athletics

The stated rationale for consideration of adding intercollegiate football varies from institution to institution and is often dependent on other factors such as size, classification, division, and location. A number of studies have focused on the motivations and reasons institutions have used to justify adding football and other athletic programs (Bruder, 2017; Feezell, 2009; Yeargen, 2013). Tokasz (2016) stated, “College administrators counter that athletics help attract more students, bolster the bottom lines of their institutions and add to the vibrancy of campus life. Many colleges rely on sports as an important marketing tool” (para. 18). Hearn, et. al. (2018) identified a number of reasons for increasing the athletic emphasis of a school including to “heighten an institution’s appeal to prospective students; increase campus engagement, excitement, community and long-term loyalty; benefit student development; and improve institutional financial health” (p. 9). The next section provides an overview of these identified reasons colleges and universities have offered for adding intercollegiate football. The topics addressed include: enrollment growth, gender balance, revenue growth, and improved school spirit/campus culture.

Enrollment growth. Anecdotally, Walker (2015) stated, small colleges and universities are “adding sports to boost enrollment (as) a significant part of the process” (para. 1). Pope and Pope (2009) argued true empirical work on the influence of athletics on the number of entering students for an institution is limited. McCloskey (2016) noted that the idea of leveraging sports to meet enrollment or revenue goals is not a new approach for improving an institution’s bottom line. Docking (2015) affirmed the long-standing nature of using athletics for enrollment purposes when he wrote about a Massachusetts based college that offers 32 varsity sports and 20 club sports:

Williams College figured out a long time ago that when you get into the minds of seventeen-year-olds, you know they live in a world where their priorities are about having a strong in-class experience as well as a fun, exciting out-of-class experience, and they’re going to pick a college that offers both. (p. 102)

Dunham’s (2007) keystone research on the motivations of athletic director’s decisions to add football found that enrollment was the number one reason for adding a team with increased applications the second most common reason. This was especially true for NCAA Division II and Division III institutions where seven of the nine schools surveyed reported it was either a somewhat important factor or the major factor. Moltz (2009) quoted Salem College Director of Athletics, Kim Fierke, who posited the idea that most student- athletes at small schools would not have considered the institution they attend, if not for athletics. Tokasz (2016) asserted there are more students who want to participate in intercollegiate athletics than there are roster spots, and thus adding more teams seems a natural way to boost enrollment.

The Associated Press (2013) provided anecdotal information from two institutions documenting enrollment growth related to the addition of athletic teams. Limestone College in South Carolina grew enrollment over a decade by increasing the number of athletic teams from 8 to 25 and increased enrollment by 775 students. Midland University in Nebraska experienced an enrollment gain of 499 students in four years through increasing athletic sports.

Jeff Docking, president at Adrian College in Michigan, implemented a strategic plan he called the Admissions Growth Model, which was predicated on building new athletic facilities for hockey, football, baseball, track, and tennis (Beene, 2010; Bruder, 2017; Cohen, 2012; Feezell, 2009; Sander, 2008; Smith, 2012). Sander (2008) described the new athletic facilities as “the cornerstone of a plan to raise enrollment through intense athletics recruiting” (para. 2). Sander (2008), in an article about Adrian College’s admissions growth, quoted Docking, who argued the use of athletics for enrollment growth could be the “fountain of youth for small liberal arts colleges” (para. 7). Cohen (2012) summarized Docking’s argument that 17-year-olds were drawn to athletics and recreation and that once students were convinced a school had their academic program, they wanted to know what else they could do there. As reported by Cohen (2012), Docking bet that students who were passionate about athletics or band in high school would want to continue those activities in college.

Small schools may need a revival of some sort to remain relevant. Beaver (2014) argued that some small private Division III schools persist because the number of athletes can exceed 50% of the student population. Bandré (2011) concurred when he shared that many smaller, private schools continue to offer intercollegiate athletics to help enrollment

goals. Demirel (2013) indicated that without these teams, many of these colleges would likely not exist: “each of those players also provide Hendrix College an influx of cash it needs to remain relevant in a world where pure liberal arts education is increasingly becoming an endangered species” (para. 12). Small colleges have come to rely on student athletes for survival. Recruitment of student athletes has become an often used and effective strategy for institutions looking to expand the size of their campuses (Bruder, 2017; Katz, Pflieger, Schaeperkoetter, & Bass, 2015; Miller & Fennell, 2016).

Enrollment challenged institutions are finding that football teams, with their initial roster sizes in the 60-70 range and long-term roster goals of 100 plus, have become attractive sources for increasing enrollment (Demirel, 2013). New or revived football teams are often the first in a series of campus expansion initiatives that help grow the student population. Eifling (2013), in an interview with D3 Football.com executive director, Pat Coleman, asked if Division III football could pump up enrollment enough to make a positive financial impact on a school. Coleman’s response was, “while schools are doing the same thing with other sports—lacrosse, notably, since you tend to get a richer tranche of students who require less of that pesky need-based aid—football, with its huge rosters, is king” (para. 10). These comments echoed sentiments shared by Charbonneau (2004) who wrote about North Carolina Wesleyan’s new football team leading to a more than doubling of the incoming freshman class.

Daughtrey (1998) found that athletic success, particularly in football, at the non-D1 level, did not lead to enrollment gains. “The results of this study do not support the claim that the positive publicity will have a positive impact on enrollment if it is applied to a division other than DI-A” (p. 104). Lee (2012) found similar results in studying non-

DI-A schools. There was a lack of enrollment benefits after winning conference championships and participating in the NCAA Basketball Tournament.

By expanding the menu of athletic offerings and by incorporating quotas for coaches (Cohen, 2012; Docking, 2015; Sander, 2008; Smith 2012), institutions are effectively turning coaches into an extension of the enrollment office (Miller & Fennell, 2014). A report from the Hearn et al. (2018) study described coaches as “highly effective recruiters, targeting specific students and building relationships with them and their families” (p. 9). Docking (2015) espoused the importance of accountability for coaches and others tasked with recruitment for extracurricular activities (e.g. band, choir, school newspaper). This has led to a “new brand of coach” (Miller & Fennell, 2014) who approaches the challenge of recruiting the quantity of players at the same level that they are recruiting the quality of players.

Gender balance. Gender balance is another metric utilized for justifying the addition of athletic teams. Administrators at some small colleges who have witnessed their enrollments skewing more female, have turned to football as a means to boost male enrollment (Suggs, 2003). Additionally, a number of former women’s colleges have added football in an effort to balance student populations. Mary Hardin Baylor College in Texas was one such university. With a 68% female population, the institution implemented a football program and welcomed 210 male football players in the first season (Pennington, 2006). Seton Hill, another former all-female college, enrolled its first majority male class the first year they added a football team. Male enrollment grew to 41% just four years after becoming coed (Pennington, 2006).

Belkin (2016) proffered some institutions added football because the proportion of males had become so low it was nearing a tipping point of males not wanting to attend at all. The College of Idaho had seen its gender balance grow to almost 70% female before adding a football team in 2011. By 2016, the institution realized a more balanced 58%-42% female to male split. Belkin also highlighted Berry College, another school with a near 70%-30% female to male split. This institution realized a 213 student increase within the first three years of adding football. One hundred seventy-nine of these students were male.

An unexpected gift of \$3.5 million allowed LaGrange College in Georgia to add an intercollegiate football team in part because President Stuart Gulley thought adding football would maximize the return on investment. Moltz (2009) quoted Gulley, “Nothing would have the return 100 male students would have in tuition” (para. 6). LaGrange was 63% female at the time of the decision and three years later the ratio was 55%-45% female to male. Gulley posited, “the new influx of males was worth its weight in tuition and diversity for the institution” (para. 8).

George Fox and Pacific University were two other institutions whose male enrollment dipped below the 40% figure that Belkin (2016) stated causes applications to drop according to enrollment officers. Meyer (2009) quoted Pacific University’s Dean of the College of Arts and Sciences who stated “at more than 60% female, there is a different classroom dynamic, and I don’t think the discourse is as rich” (para. 4). George Fox administrators argued that football would bring a cadre of students who would not have attended the Oregon based institution otherwise.

Feezell's (2009) research on six institutions that added football in 2002 or 2003 found that all six increased the number of male students by more than 9%, with one school realizing a 19% increase in male students. He further stated "recruiting men is a challenge for many smaller institutions, so adding football may offer a strategy (attracting football players), of course, but also potentially appeal to men generally" (p. 69).

In summary, many small colleges face challenges in recruiting men in an effort to keep a desirable gender balance. In instances where the balance falls below a 60%-40% female to male split, they often seek programmatic and in this case athletic programs, to bolster the male population. A number of schools realized significant growth in their male population after the addition of intercollegiate football. Small schools that already field football teams are trying to reap these benefits. Hearn et al. (2018) stated "CIC institutions with football teams have expanded the size of their football rosters, perhaps as part of a strategy to attract males" (p. 21).

Financial benefits. In addition to the aforementioned enrollment reasons, colleges also have realized monetary growth in tuition and auxiliary funds such as bookstore sales, sponsorships, and ticket sales. One additional source of enrollment and revenue also comes from students who are tangentially connected to football.

The biggest boost; however, both academically and financially was the addition of a marching band. Officials at the college reported that their band grew from 30 to 100 students in a five-year span; the Music Department had to increase faculty to meet the need. (Miller & Fennel, 2015, para. 7)

Non-D1 colleges and universities realize their financial gains principally from student tuition. Enrolling an additional 40 or more new football players, 20 or more new band members and cheerleaders, as well as additional student athletic trainers, equipment managers, and general football fans can make a huge impact on a college's bottom line (Henry, 2016; McCloskey, 2016; Miller & Fennel, 2016). Zalaznick (2015) quoted Robin Baker, president of George Fox University in Oregon, "if you can imagine 130 tuition-paying students, they're bringing somewhere in the neighborhood of \$2.5 million a year—that's far and above what it costs to run the program" (p. 32). The decision to add football has proven to be the quintessential million-dollar (revenue) question.

Colleges and universities are realizing tuition gains from new athletics teams, but also are collecting auxiliary income in the form of room and board fees, athletic ticket sales, and sport-based merchandise. Pennington (2006) offered that Mary Hardin Baylor doubled the number of students living on campus, which boosted housing revenue significantly. Moltz (2009) shared information from LaGrange College, which despite losing every game for two years, generated more than \$40,000 annually in ticket sales. The College of Idaho added \$200,000 in additional revenue from game day sales of football related merchandise (Belkin, 2016). Adding sports teams, especially sports like football, have the potential to generate revenue, providing a viable option for schools facing financial challenges.

School spirit/sense of community. Another motivation often shared for the addition of intercollegiate football is that by adding the sport, school spirit will increase and a greater sense of community will occur. Yeargen (2013) defined school spirit as "a mark of distinction or feeling of support towards a social institution understood to be

distinctive, central and enduring by multiple constituencies” (p. 7). Toma (2003) argued similarly that new and winning football teams improve school spirit for current students and alumni. The presence of football can be but one determinant of an institution’s culture and given that price distinctions are not always clear, a number of schools use institutional culture to build identification and brand (Toma, Dubrow, & Hartley, 2005).

Miller and Fennel (2015) described how Saturdays at a school that adds football will never be the same as the “excitement created by a new sport created a healthy buzz on campus” (para. 7). Excitement is a stirring emotion and emotion helps universities build bonds of affiliation between the school, students, and alumni (Yeargen, 2013). Loudenback (2015) shared, “sure, students can share pride in their classes, clubs, and other activities — but nothing demonstrates school spirit quite like the energy on game day” (para. 2).

Warner, Shapiro, Dixon, Ridinger, and Harrison (2011) summarized the argument for sense of community as the “most pervasive and consistent claim” (p. 237) for intercollegiate athletics. This sense of community or school spirit manifests itself for student athletes and fans. Broughton (2012) affirmed the idea that football “adds a sense of community on campus and among the alumni (para.13). Warner et al. (2011) further claimed sport is the place for the community to connect and interact and that “football is instrumental, perhaps invaluable, to building a strong sense of community on campus” (p. 237). Their research findings, however, found that one season of football did not significantly facilitate a change in the sense of community.

Toma and Cross (1998) described athletics as a surrogate for campus community or culture on many college campuses. Harshaw (2009) claimed that whether a team wins

or loses can reflect how students feel about their institution. Katz et al. (2015) concurred with this claim, as they stated “athletic department success has to be measured differently than just with on-field performance” (p. 117). Colleges and universities understand that adding intercollegiate football fosters a change in campus culture and that can have tertiary effects on recruitment and retention. School spirit can lead students to believe that the institution is the place to be and showcases their school pride.

There are numerous reasons why colleges and universities added intercollegiate football between 2005 and 2014. Almost every institution referenced some element of enrollment being a driver for increased enrollment or gender balance. Other benefits include school spirit and the myriad revenue implications from greater enrollment, ticket sales, and bookstore sales of spirit wear. Yeagen (2013) stated “the decision to add football is not quick or easy” (p. 1), but institutions are clearly motivated for many if not all of the aforementioned reasons.

Rationale for Studying the Addition of Football Over Other Sports

Football is not the only sport which institutions are adding in an effort to increase enrollment. Lacrosse, wrestling, bowling and other sports have also been added at institutions across the country (Docking, 2015). What sets football apart from other sports includes factors such as the largest roster size commonly found at the college level (Pennington, 2006; Gardiner, 2010) and the ability to most greatly impact enrollment (Dunham, 2007).

Football can also help schools with gender balance issues (Feezell, 2009; Gardiner 2010). Feezell (2009) articulated the benefits of football in four areas of college life “entertainment, identity, identification, and revenue” (p. 68) and stated that football

impacted these areas more than any other sport. Demirel (2013) pointed to football as the sport that could save liberal arts colleges from financial crises. Miller and Fennell (2015) described another potential benefit of adding football, “the biggest boost, however, both academically and financially, was the addition of a marching band” (para. 7). Ancillary activities and their potential for growth, make the addition of intercollegiate football a realistic revenue alternative to examine. In total, football, more than any other sport, provides an institution with more opportunities for enrollment, revenue, gender balance, and other net positive outcomes.

The Lack of a ‘Flutie Factor’ for Small Colleges

When Doug Flutie completed a Hail-Mary pass to defeat the Miami Hurricanes in 1984 many thought the most significant outcome of that event would be his receiving the Heisman trophy six weeks later. What was unexpected was the surge in admissions applications Boston College received for the 1985-86 academic year. Sperber (2000) posited that a school could realize a ‘Flutie Factor’ after a nationally televised sports moment. McEvoy (2005) realized that only football provided statistically significant increases in applications.

Daughtrey (1998) explored the potential for championships at the NCAA Division I-AA (now Football Championship Division), Division II, and Division III to increase enrollment. Daughtrey discovered, “there was no statistically significant increase in enrollment” (p. 104) for schools not playing football at the NCAA D1 level. This is likely because the national media coverage for Non-D1 football is significantly less than for other divisions and classifications. Brunet (2010) reported that 61.1% of recruited athletes stated the overall athletic success of an institution was not an important

factor when deciding where to attend. When the question was expanded to define success as the presence of multiple national championships, 73.6% responded similarly that it was not an important factor in their decision.

A Comparison of Two Internal Studies

Two NCAA Division III institutions who initiated feasibility studies in the latter half of the first decade of this century serve as a suitable comparison group for the process higher education institutions use to consider the addition of intercollegiate football. One school, Hendrix College, ultimately launched a football team in 2013. Calvin College, despite completing an internal survey in 2011, had not instituted a team as of 2018.

Hendrix College. Hendrix College is a Division III institution located in Conway, Arkansas. In 2007, President Timothy Cloyd commissioned a committee of various stakeholders to determine if the benefits of reviving intercollegiate football were in the best long-term interests of the institution (Hendrix College Football Committee, 2008). Hendrix discontinued its football program in 1960, but in the interest of growing the student body (Lederman, 2008), President Cloyd started the exploration process. In addition, two consultants were engaged to conduct research on the financial implications, including the potential need for adding additional women's sports teams and second to discern the attitudes of current and prospective students, faculty, staff, and alumni. Armed with data from 125 faculty and staff, 500 alumni, and over 518 current students, plus an additional 803 prospective students, the Hendrix College Football Committee (2008) moved forward with additional studies on the impact on enrollment, student life, gender and diversity balance, and possible curricular additions.

The Hendrix College Football Committee (2008) described the process whereby George Dehne and Associates (GDA) was used to complete research on the attitudes of current faculty, staff, students, alumni, and prospective students. Findings of note from the GDA research included the disconnect between current students, (71% responded with negative or very negative feelings about the addition of football) and administrators (59% felt positive or very positive about the addition). Faculty were twice as likely (50%) to feel negative or very negative about the addition of football than to feel positive or very positive (25%). Alumni were split almost equally with the positive reactions slightly ahead of the negative by a 31% to 28% margin. Table 5 summarizes the responses.

Table 5

Survey Responses to the Issue of Adding Football at Hendrix

Type	<i>N</i>	Very Positive/ Positive	Neutral	Negative/ Very Negative
Faculty	63	25%	25%	50%
Administration	24	59%	33%	8%
Staff	38	26%	32%	42%
Alumni	500	31%	41%	28%
Current students	518	14%	15%	71%

Note. Adapted from *2007-2008 Football Study Report*, by the Hendrix College Football Committee, 2008, pp, 2-3. Hendrix College, Conway, AR.

The Hendrix College Football Committee (2008) also described the process whereby Alden and Associates were appointed to examine the financial and administrative impacts of adding football. The committee's comprehensive report predicted an additional \$648,000 of tuition and sponsorship revenue to be realized in the first year, while also moving Hendrix toward a more balanced campus in terms of gender.

The committee projected 60 new male football players would close much of the 55%-45% female gender advantage which existed in 2007. Alden and Associates projected that the revenue from the new students, including auxiliary revenue (roughly \$786,000), would be more than able to cover the operating expenses of the football program (almost \$600,000 in year one but under \$500,000 in future years). Operating expenditures included initial expenses regarding equipment for both the team and support staff, money for travel, game day operations, housing and meals, as well as ongoing costs associated with required new personnel including new positions for an athletic trainer, a sports information assistant, a compliance officer, and football coaches. Additionally, this influx of revenue would also allow for the addition of five new faculty members, which would keep the student faculty ratio at a consistent 12:1 proportion (Hendrix College Football Committee, 2008).

The final report to the board of trustees by the appointed committee included a number of concerns including the lack of a “core leadership group emerging on campus to support the development of football” (Hendrix College Football Committee, 2008, p. 4). Additional concerns included the lack of significant current student support for the addition of football, the need for an investment in athletic facilities that might be better spent elsewhere, and the perception that the current culture of the campus was not compatible with football. The final report also included information from Alden and Associates who had determined the only cost that would not be covered by the incoming revenue would be capital improvements to the athletic facilities which ranged from approximately \$500,000 to \$3 million. These funds were identified as fundraising opportunities that would not affect the institution’s bottom line.

In the spring of 2008, the Hendrix College Board of Trustees met and considered whether to formally approve the addition of football. Ultimately, “the financial benefits outweighed all other concerns” (Demirel, 2013, p. 13). Steps were taken to prepare the institution for an inaugural season. However, due to the Great Recession of 2008 and 2009, Hendrix tabled plans for the addition of football until a later date. In the spring of 2012, Hendrix hired a full-time football coach hoping he would recruit players a year in advance of implementing a team. In the fall of 2013, Hendrix College fielded its first football team since 1960 with a roster of 51 players, including 26 from outside the state of Arkansas. At least five of the players had enrolled in the fall of 2012. By 2014, the roster had increased to 73 players, 40 of whom were from out-of-state (Hendrix College, 2018).

Hendrix continued its unbeaten streak through the first week of the 2013 football season after a last second field goal lifted them to a 46-44 come from behind victory (Demirel, 2013). Hendrix completed its first season with a 3-7 record. In their third season, the Warriors won the Southern Athletic Conference and earned a spot in the Division III playoffs (Hendrix College, 2018).

Calvin College. Calvin College, a Christian college located in Grand Rapids, Michigan, studied the need for a football team in 1987. While the recommendation, at that time, was to not add football to the mix of athletic opportunities, the Calvin College Football Feasibility Task Force (2011) reported the 1987 committee suggested “Calvin should revisit the football question periodically” (p. 3). Approximately 25 years later, many of the reasons for not instituting a football program had changed, notably the lack of need for a sports program to attract students to the institution as enrollment had been

below capacity for some time. Not only had many of Calvin's feeder high schools added football in the interim, but a number of key competitors had added it as well.

Furthermore, Calvin had successfully added other athletic programs (men's and women's lacrosse), and had witnessed students enrolling who otherwise would have gone elsewhere (J. Timmer, personal communication, December 31, 2017).

Calvin pursued both ethnographic and financial research in determining whether to recommend the addition of football. Six institutions which had similar characteristics to Calvin were included for comparison, including three which had recently added football. Calvin also obtained an internal study from Asbury University which collected data on 12 institutions (Calvin College Football Feasibility Task Force, 2011).

Armed with these data, key findings were presented by the Calvin College Football Feasibility Task Force to the Board of Trustees of the institution. The key positive findings regarding the addition of football included increases in male and diverse student enrollments, greater school spirit and increased sense of community, and more stable finances. Negative findings included significant cost increases, increased disciplinary problems, a changed campus culture, and decreased retention rates.

A variety of questions were posed to faculty, staff, alumni, and current students through a survey created by the Calvin College Football Feasibility Task Force. Similar to Hendrix, the results were mixed. However, the current students at Calvin were much more interested in adding football than their peers at Hendrix. Table 6 summarizes constituent responses related to adding football, including the consistent negative response from faculty.

Table 6

Responses to: I Would Like to See Calvin Start a Football Team

Type	<i>n</i>	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
Faculty	297	27%	25%	49%
Staff	337	48%	22%	27%
Alumni	5724	46%	19%	35%
Current students	1940	58%	17%	26%

Note: Adapted from *Report of the Football Feasibility Task Force*, by Calvin College Football Feasibility Task Force, 2011, Appendix L.

These data points underpinned the ultimate favorable recommendation to move forward with the process of adding intercollegiate football at Calvin College. The Calvin College Football Feasibility Task Force (2011) report included a number of concerns including the impact on Title IX and the potential negative changes to the college community with the addition of dozens of “aggressive males” (p. 10). One of the chief aims of the study was to discern whether football expanded the mission of Calvin College or compromised it. The Calvin College Football Feasibility Task Force (2011) stated: “football, even with its considerable challenges, (would) enhance rather than limit the mission of the college” (p. 4).

By 2018, Calvin had not yet implemented a football team. A number of unforeseen hurdles emerged after the recommendation for implementation including financial difficulties regarding campus debt and numerous changes in leadership. After the Calvin College Football Feasibility Task Force voted to proceed with offering football, the decision was sent to the Calvin College Board of Trustees in February of 2012. At that time, the president of Calvin tabled the motion due to his pending

retirement. As of 2018 the motion had not been reintroduced at the board level (J. Timmer, personal communication, June 25, 2018).

Two small college's internal studies were reviewed and the similarities between the two are striking. Both instituted broad-based committees to explore whether or not football should be added to the athletic offerings. Both surveyed various stakeholders across the institution, including alumni bases. Calvin and Hendrix both concluded that adding intercollegiate football would positively impact the institution for myriad reasons. It took Hendrix five additional years before the first game was played. As of 2018, Calvin had not yet implemented a football team, despite the approval in 2011. It is clear there is more to the decision to add football than gaining the approval of a broad-based committee.

Summary

This chapter summarized the relevant literature regarding the impact on enrollment by the addition of intercollegiate football. First, the concepts of enrollment management and strategic enrollment management were explored. Next, the historical context of institutions adding intercollegiate football was examined, including why the time frame of 2005 to 2014 was a keystone period for the addition of the sport. This was followed by a discussion of the various motivations for adding football including enrollment, gender balance, financial, and school spirit. Finally, two higher education institution case studies were summarized and compared to demonstrate the thorough process schools implement when determining whether to add football to their athletic offerings.

The literature supports the theory that the presence of football teams positively impacts enrollment while athletic or football success has no discernable effect on enrollment. However, no major studies have evaluated the impact of the addition of football as it relates to new male student enrollment and gender balance. Additionally, no major studies exist on enrollment by gender according to athletic membership classification. Chapter 3 explains the methodology used in the study, including the description of the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and limitations of the study.

Chapter 3

Methods

The first purpose of this study was to discern the change in first year male student enrollment at Non-D1 private colleges and universities that added intercollegiate football between 2005 and 2014. A second purpose of the study was to determine differences in first year male student enrollment based upon an institution's membership classification (NCAA Division II, NCAA Division III, NAIA, or NCCAA). The third purpose of the study was to explore any changes to the gender balance at non-D1 private colleges and universities as a result of the addition of intercollegiate football. The final purpose of this chapter was to discern differences in gender balance based up on an institutions membership classification. This chapter denotes the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing and limitations of the study.

Research Design

An ex-post-facto quasi-experimental research design was used in this study. The dependent variables for this quantitative study were first year male student enrollment and gender balance (percentage of males in the first year class). The independent variables were the football program status (added a team between 2005 and 2014 or did not add a team between 2005 and 2014) and the membership classification of the institution (NCAA Division II, NCAA Division III, NAIA or NCCAA).

Selection of Participants

The population for this study was private colleges and universities that do not belong to D1 of the NCAA. The sample included 86 private colleges and universities.

Forty-three institutions added intercollegiate football teams between 2005 and 2014. Forty-three institutions similar in size, location, and membership classification that already had intercollegiate football teams or did not add intercollegiate football between 2005 and 2014 were used as a comparison group.

Non-random purposive sampling was utilized for this study. Lunenberg and Irby (2008) described purposive sampling as choosing a sample based on the researcher's knowledge of the group to be sampled. Furthermore, Lunenberg and Irby (2008) stated, "Clear criteria provide a basis for describing and defending purposive samples" (p. 175). In the instance of this research project, a purposive sample provided the best opportunity to examine the impact of adding an intercollegiate football team on new male student enrollments at private colleges and universities. The 86 schools were identified through communication with the National Football Foundation (2017), which maintains a database of institutions adding and dropping football. The complete list of institutions that added intercollegiate football between 2005 and 2014 is provided in Appendix A. Institutions were matched to a comparable college or university that did not add football by school size, geographic location (typically state or adjacent state in a few instances), and athletic membership classification using data from the Equity in Athletics Disclosures Act (EADA) website (2019). The list of matched institutions is provided in Appendix B

Measurement

The dependent variables for this quantitative study were total first year male student enrollment as reported to IPEDS and gender balance (male to female ratio) during the year prior to offering intercollegiate football and the first year a team was fielded.

For example, Hendrix College fielded a football team for the first time in 2013. First year male student enrollment numbers and gender balance percentages were collected from data reported in fall 2012 and fall 2013. Likewise corresponding data were collected for Hendrix's matched institution, The University of the Ozarks, for the same time frame. This process was repeated for each of the 43 schools in the study and their matched institutions. The first independent variable examined was the football program status (added a team between 2005 and 2014 or did not add a team between 2005 and 2014). The second independent variable was the membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA).

Data Collection Procedures

This study used a quantitative research design for data collection and analysis. The researcher submitted a request for approval of the study through the Baker University Institutional Review Board (IRB) on December 11, 2018. The researcher was granted approval to conduct research from the IRB committee on December 12, 2018 (see Appendix C).

Archival data were collected from the IPEDS related to overall student enrollment, new male student enrollment, and gender balance. Data for matching similar institutions came from three sources, the IPEDS, the National Football Foundation (NFF), and the Equity in Athletics Data Analysis (EADA). Athletic membership classification data were obtained from EADA. IPEDS data were accessed to determine the number of first year males attending each institution as well as total number of undergraduate students, and the state in which the institution was located. A determination of whether the institution had added football between 2005 and 2014 was

ascertained by reviewing NFF and EADA data. Data were arranged in an Excel spreadsheet before being imported into IBM SPSS Statistics 25.0.

Data Analysis and Hypothesis Testing

The following section includes the four research questions, associated hypotheses, and a description of the data analyses.

RQ1. To what extent is there a difference in the change in first year male student enrollment between non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H1. There is a difference in the change in first year male student enrollment between non-NCAA Division I Colleges and Universities that added intercollegiate football and those that did not add football during the same period.

A two-factor analysis of variance (ANOVA) was conducted to test H1. The two categorical variables used to group the dependent variable, the change in first year male student enrollment, were football program status and the membership classification of the institution. The two-factor ANOVA can be used to test three hypotheses including a main effect for football program status, a main effect for membership classification of the institution, and a two-way interaction effect (Football Program Status x Membership Classification). The main effect for football program status was used to test H1. The level of significance was set at .05.

RQ2. To what extent does membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA) impact the difference in the change in first year male student enrollment between Non-Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H2. The membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA) impacts the difference in the change in first year male student enrollment between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period.

The interaction effect (Football Program Status x Membership Classification) from the first two-factor ANOVA was used to test H2. The level of significance was set at .05.

RQ3. To what extent is there a difference in the gender balance of an institution between NCAA Division II, NCAA Division III, NAIA or NCCAA colleges and universities that added intercollegiate football and those that did not add football during the same period?

H3. There is a difference in the change in the gender balance between non-NCAA Division I Colleges and Universities that added intercollegiate football and those that did not add football during the same period.

A second two-factor ANOVA was conducted to test H3. The two categorical variables used to group the dependent variable, change in gender balance, were football program status and the membership classification of the institution. The two-factor ANOVA can be used to test three hypotheses including a main effect for football program status, a main effect for membership classification of the institution, and a two-way interaction effect (Football Program Status x Membership Classification). The main effect for football program status was used to test H3. The level of significance was set at .05.

RQ4. To what extent does membership classification of the institution (NCAA

Division II, NCAA Division III, NAIA, NCCAA) impact the difference in the gender balance for non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H4. The membership classification of the institution (NCAA II and III or NAIA and NCCAA) impacts the difference in the gender balance between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period.

The interaction effect (Football Program Status x Membership Classification)) from the first two-factor ANOVA was used to test H4. The level of significance was set at .05.

Limitations

According to Lunenberg and Irby (2008), limitations are factors that may have an effect on the results of a study beyond the control of the researcher. The study had the following limitations:

1. Variables outside of the addition of intercollegiate football could impact new male student enrollment or the gender balance of institutions. Such variables could be regional or national in scope and impact colleges or universities of all classifications.
2. Enrollment information was gathered from IPEDS and is dependent upon institutional reporting of accurate information. In some instances, schools may report data for traditional undergraduate students and extension-based sites and/or non-traditional students. These combined numbers could mute or obscure accurate data representations for traditional undergraduate students.

3. The ability to perfectly pair institutions to serve as a comparison group to the colleges and universities that added intercollegiate football is limited. Data could vary because some institutions could only be matched on two of the three matching criteria (enrollment, membership classification, and geographic location).

Summary

This chapter summarized the methodology used in the current study. The research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and limitations were described in this chapter. Chapter 4 presents the results of the data analysis and hypothesis testing.

Chapter 4

Results

The first purpose of this study was to discern the impact of adding intercollegiate football on first-year male student enrollment at non-NCAA Division I private colleges and universities between 2005 and 2014. A second purpose of the study was to determine differences in enrollment impact based upon an institution's membership classification: NCAA Division II, NCAA Division III, NAIA, or National Christian College Athletic Association (NCCAA). The third purpose of this study was to explore the change to the gender balance of first year students at non-NCAA Division I private colleges and universities as a result of the addition of intercollegiate football. The final purpose of this study was to discern the impact of membership classification on the change in gender balance at non-NCAA Division I private colleges and universities. This chapter describes descriptive statistics and the results of hypothesis testing.

Descriptive Statistics

The IPEDS database was accessed to gather the fall enrollment figures for the 86 institutions in this study. The 86 institutions were sorted by their athletic membership classification and by their football program status (added or did not add intercollegiate football) during the years of 2005-2014. Table 7 summarizes the frequencies for football program status at NCAA Division II, NCAA Division III, NAIA, and NCCAA institutions included in the current study.

Table 7

Frequencies by Membership Classification of Adding and Non-Adding Institutions

Football Program	NCAA Div. II	NCAA Div. III	NAIA	NCCAA
Added	6	16	17	4
Did Not Add	8	16	15	4

Hypothesis Testing

Four hypotheses were tested based on four research questions. Two-factor ANOVAs were used to test the hypotheses. The main effect from the first ANOVA was used to test H1 and the interaction effect from the first ANOVA was used to test H2. The main effect of the second ANOVA was used to test H3 and the interaction effect of the second ANOVA was used to test H4. The four research questions, hypotheses, analysis, and the results of the hypothesis testing are provided in this section.

RQ1. To what extent is there a difference in the change in first year male student enrollment between non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H1. There is a difference in the change in first year male student enrollment between non-NCAA Division I Colleges and Universities that added intercollegiate football and those that did not add football during the same period.

A two-factor analysis of variance (ANOVA) was conducted to test H1. The two categorical variables used to group the dependent variable, change in first year male student enrollment, were football program status and the membership classification of the institution (NCAA Division II, NCAA Division III, NAIA or NCCAA). The two-factor ANOVA can be used to test three hypotheses including a main effect for football program status, a main effect for membership classification of the institution, and a two-

way interaction effect (Football Program Status x Membership Classification).

The main effect for football program status was used to test H1. The level of significance was set at .05.

The results of the analysis indicated a statistically significant difference between the means, $F = 18.749$, $df = 1, 78$, $p = .000$. See Table 8 for the means and standard deviations for this analysis. The mean change in the number of new male students for non-NCAA Division I Colleges and Universities that added intercollegiate football ($M = 46.16$) was higher than for non-NCAA Division I Colleges and Universities that did not add intercollegiate football ($M = -4.67$). H1 was supported.

Table 8

Descriptive Statistics for the Results of the Test for H1

Football Program Status	<i>M</i>	<i>SD</i>	<i>N</i>
Added	46.16	53.52	43
Did Not Add	-4.67	26.83	43

RQ2. To what extent does membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA) impact the difference in the change in first year male student enrollment between Non-Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H2. The membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA) impacts the difference in the change in first year male student enrollment between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period.

The interaction effect (Football Program Status x Membership Classification) from the first two-factor ANOVA was used to test H2. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between at least two of the means, $F = 1.15$, $df = 3, 78$, $p = .334$. See Table 9 for the means and standard deviations for this analysis. The membership classification of the institution (NCAA II and III or NAIA and NCCAA) did not impact the difference in the change in first year male student enrollment between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period. No post hoc was warranted. *H2* was not supported.

Table 9

Descriptive Statistics for the Results of the Test for H2

Football Status	Membership	<i>M</i>	<i>SD</i>	<i>N</i>
Added	NCAA Division II	8.00	29.82	6
	NCAA Division III	70.06	48.47	16
	NAIA	42.22	55.32	17
	NCCAA	23.50	61.93	4
Did Not Add	NCAA Division II	-9.88	36.19	8
	NCAA Division III	4.00	28.65	16
	NAIA	-6.40	16.02	15
	NCCAA	-22.50	28.50	4

RQ3. To what extent is there a difference in the gender balance of an institution between NCAA Division II, NCAA Division III, NAIA or NCCAA colleges and universities that added intercollegiate football and those that did not add football during the same period?

H3. There is a difference in the change in the gender balance between non-NCAA Division I Colleges and Universities that added intercollegiate football and those that did not add football during the same period.

A second two-factor ANOVA was conducted to test H3. The two categorical variables used to group the dependent variable, change in gender balance, were football program status and the membership classification of the institution (NCAA II and III or NAIA and NCCAA). The two-factor ANOVA can be used to test three hypotheses including a main effect for football program status, a main effect for membership classification of the institution, and a two-way interaction effect (Football Program Status x Membership Classification). The main effect for football program status was used to test H3. The level of significance was set at .05.

The results of the analysis indicated a statistically significant difference between the means, $F = 5.470$, $df = 1, 78$, $p = .022$. See Table 10 for the means and standard deviations for this analysis. The mean change in the Gender Balance for non-NCAA Division I Colleges and Universities that added intercollegiate football ($M = 0.054$) was higher than for non-NCAA Division I Colleges and Universities that did not add intercollegiate football ($M = -0.001$). H3 was supported.

Table 10

Descriptive Statistics for the Results of the Test for H3

Football Program Status	<i>M</i>	<i>SD</i>	<i>N</i>
Added	0.054	0.103	43
Did Not Add	-0.001	0.052	43

RQ4. To what extent does membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, or NCCAA) impact the difference in the gender balance for non-NCAA Division I colleges and universities that added intercollegiate football and those that did not add football during the same period?

H4. The membership classification of the institution (NCAA II and III or NAIA and NCCAA) impacts the difference in the gender balance between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period.

The interaction effect (Football Program Status x Membership Classification)) from the second two-factor ANOVA was used to test H4. The level of significance was set at .05. The results of the analysis indicated there was not a statistically significant difference between at least two of the means, $F = 1.885$, $df = 3, 78$, $p = .139$. See Table 11 for the means and standard deviations for this analysis. The membership classification of the institution (NCAA Division II, NCAA Division III, NAIA, NCCAA) did not impact the difference in the change in gender balance between non-Division 1 colleges and universities that added intercollegiate football and those that did not add football during the same period. No post hoc was warranted. H4 was not supported.

Table 11

Descriptive Statistics for the Results of the Test for H4

Football Status	Membership	<i>M</i>	<i>SD</i>	<i>N</i>
Added	NCAA Division II	-0.036	0.039	6
	NCAA Division III	0.078	0.069	16
	NAIA	0.070	0.127	17
	NCCAA	0.033	0.123	4
Did Not Add	NCAA Division II	0.002	0.083	8
	NCAA Division III	0.009	0.036	16
	NAIA	0.001	0.046	15
	NCCAA	-0.055	0.052	4

Additional Analyses

An additional analysis was completed to test whether the addition of football led to increased new male student enrollment. A chi-square test of equal percentages was conducted. The observed frequencies were compared to those expected by chance. The level of significance was set at .05.

The results of the test of equal percentages indicated a statistically significant difference between the observed and expected values, $\chi^2 = 15.760$, $df = 1$, $p = 0.00$. The observed frequency for schools that added football ($n = 35$) was higher than the expected frequency ($n = 26$) and the observed frequency of those that did not add football and did not increase enrollment ($n = 26$) was also higher than the expected frequency ($n = 17$) (see Table 12). Those that added football increased enrollment, while those that did not add football did not increase enrollment. These results provide further support that adding intercollegiate football leads to increased first-year male enrollments.

Table 12

Observed and Expected Frequencies for Additional Analyses

Football	Enrollment	Observed	Expected
Added	Increased	35	26.0
	Did not Increase	8	17.0
Did not Add	Increased	17	26.0
	Did not Increase	26	17.0

Summary

This chapter presented descriptive statistics and the results of the hypothesis testing. The results of the data analyses revealed that institutions which added football realized greater new male student enrollments than expected. There was a statistically significant difference between the enrollment changes of the schools which added football and those that did not add football. Although there were measurable, and in some instances sizable differences, in new male student enrollments based upon the membership classifications of the schools, the results were not statistically significant. Furthermore, the results of the data analyses also revealed that institutions which added football realized greater gains in gender balance. There was a statistically significant difference in the change of the gender balance of the incoming freshman class for schools that added football as opposed to those that did not add football. Despite differences between membership classifications, no significant difference was realized.

An additional analysis conducted to analyze first year male enrollment found that adding intercollegiate football, regardless of classification, resulted in a statistically higher number of males. Institutions that added football saw an increase in first-year male enrollment and institutions that did not add football did not see an increase.

Chapter 5 provides an interpretation of the results of the study. The concluding chapter includes a summary of the study and major findings. Additionally, Chapter 5 presents findings associated with relevant literature, and concludes with implications and recommendations for further action and research.

Chapter 5

Interpretation and Recommendations

This study examined the impact on first-year male student enrollment and the percentage of male students in a first-year class at institutions which added intercollegiate football. A review of the methodology and major findings are also presented and then the findings are related to current literature. Finally, conclusions, including implications for action and suggestions for future research are offered.

Study Summary

This study focused on private, four-year colleges and universities that added intercollegiate football between 2005 and 2014. Enrollment data from IPEDS were studied from the perspective that the addition of intercollegiate football would lead to enrollment changes. Two aspects of enrollment changes were considered; first-year male enrollments and gender balance.

Overview of the problem. Small, non-Division I colleges and universities have intentionally used intercollegiate athletics as a part of an enrollment strategy (Feezell, 2009), but few studies have sought to quantify the changes in enrollment that result from the addition of sports. Bruder (2017) suggested one of the rationales for adding sports to boost enrollment was the continued declines in enrollments at small, private institutions. Jones (2009) spoke to the complex nature of the impact of college athletics on higher education and the lack of research, particularly for non-Division I institutions.

Currently, the scope of research on intercollegiate athletics and its relationship with enrollment is limited (Katz et al., 2015). The research that does exist, focuses mostly on NCAA Division I athletics. Hearn et al. (2018) stated, “few broad-based

studies have examined the evolution of colleges' athletic programming" (p. 6). Huffman (2013) argued this sentiment as well and stated that only a limited number of studies have documented the enrollment impact the addition of football has on non-Division I higher education institutions. The current study examined the impact of adding intercollegiate football between 2005 and 2014 on enrollment and gender-balance at private, four-year colleges and universities whose athletic membership falls outside of NCAA Division I.

Purpose statement and research questions. The first purpose of this study was to discern the impact of adding intercollegiate football on first-year male student enrollment at non-NCAA Division I private colleges and universities between 2005 and 2014. A second purpose of the study was to determine differences in enrollment impact based upon an institution's membership classification: NCAA Division II, NCAA Division III, NAIA, or National Christian College Athletic Association (NCCAA). The third purpose of this study was to explore any changes to the gender balance at non-NCAA Division I private colleges and universities as a result of the addition of intercollegiate football. The final purpose of this study was to discern the impact of membership classification on the change in gender balance at non-NCAA Division I private colleges and universities. Four research questions guided this study.

Review of the methodology. An ex-post-facto quasi-experimental research design was used in this study. The dependent variables for this quantitative study were first year male student enrollment and gender balance (percentage of males in the first year class). The independent variables were the football program status (added a team between 2005 and 2014 or did not add a team between 2005 and 2014) and the

membership classification of the institution (NCAA Division II, NCAA Division III, NAIA or NCCAA).

Eighty-six private institutions were selected for the study and included 43 institutions which added intercollegiate football between 2005 and 2014 and a control group of 43 institutions of similar size, membership classification, and geographic location that had not added intercollegiate football during the same time frame. Enrollment data for all 86 institutions were collected from the IPEDS database. Statistical analyses were run on the change in new male student enrollments for both groups as well as the change in the percentage of male students in the incoming first-year classes. Two, two-factor ANOVAs were utilized to test the four hypotheses of the study.

Major findings. This study determined the addition of intercollegiate football resulted in higher first-year, male enrollments compared to institutions which did not add football. Institutions that added intercollegiate football realized an average increase of 46.16 additional first-year male students. This compares to a loss of 4.67 male first-year students on average at similar institutions which did not add intercollegiate football over the same two year period. The percentage of male first-year students increased at institutions which added intercollegiate football, improving the male to female gender balance. Schools which added intercollegiate football realized an average increase of 5.4% of males compared to a loss of .1% males at institutions which did not add football.

The findings regarding the effect of membership classification on differences in first-year male enrollment between institutions that added football and those that did not add football were not significant. Two factors impacted this result: increases in enrollment were realized across all membership levels, and the sample sizes in some cells

had low counts. However, regardless of membership classification, the addition of football resulted in increases in first-year enrollment at the institutions included in the current study.

An additional analysis of whether adding intercollegiate football made a difference in first-year male enrollment was conducted. A chi square test revealed more institutions that added an intercollegiate football team realized first-year male student enrollment gains than expected by chance. Similarly, more institutions that did not add a football team failed to increase enrollment than expected by chance. Adding intercollegiate football resulted in increased first-year male student enrollment.

Findings Related to the Literature

The results of the study support existing research and literature regarding the connection between intercollegiate athletics and enrollment. The results of the current study support Feezell's (2009) assertion that "addition of football may exert some initial positive influence on overall enrollment" (p. 69). These results also support the Hardwick-Day (2008) finding that adding football at the NCAA Division II level is helpful in building male enrollment. A finding in the current study was an average increase of 46.16 males across all institutions that added football. The average male increase across all membership classifications found in the current study also confirms Bandré's (2011) statement, "many schools offer intercollegiate athletic competition to help with enrollment goals" (p. 38). Belkin (2016) reported Alderson Broaddus University more than doubled its male student population (from 202 to 543) in the first three years of fielding a football team. This increase in male students is consistent with the findings of the current study. Hendrix College Football Committee (2008) suggested

Hendrix should “target a recruiting class of 25-40 student-athletes per year” (p. 76). This recommendation aligns with the results of the current study which found an average increase of first-year males was 46.16 for all institutions. However, the Hendrix target for first-year males is well below the NCAA Division III average of 70.06 new male students found in this study.

The results of the current study concerning increased male first-year enrollment is also consistent with Katz et al. (2015). The authors reported that “university administrators are increasingly acknowledging that athletics are being used to combat decreasing enrollment numbers” (p. 117) especially in small colleges. The current study results demonstrated that the addition of intercollegiate football did lead to new first-year male student enrollment increases.

Dunham (2007) reported that the addition of football could provide additional revenue for institutions which added intercollegiate football by increasing the number of tuition-paying male students. Results from the current study are aligned with Dunham’s finding and demonstrated male student enrollment growth as a result of adding football. Results of the current study support Feezell’s (2009) statement, “the addition of football seems to have an impact on the percentage of men in the overall enrollment” (p. 69). Bruder (2017) highlighted Shenandoah University as an institution that added football for the “sole purpose of attracting more male students to its female-dominated student body” (p. 38). The results of the current study found adding football increased the percentage of first-year male students. Pennington (2006) reported the percentage of males in the first year class increased 6%, which is similar to the 5.4% average increase of all institutions which added intercollegiate football in the current study.

Gender balance results in the current study were not consistent with Belkin (2016) who asserted that the shift in gender balance for all schools that added football between 2005 and 2015 was closer to 9% as opposed to the 5.4% from this study. The statistics quoted by Belkin included public institutions and NCAA Division I institutions, which this study did not include. Suggs (2003) noted enrollments at small liberal arts colleges “had been skewing female for many years and colleges—particularly in the South and Midwest—are adding male teams, most notably football, to boost male enrollment” (para. 19). The findings related to male gender balance in the current study support the Suggs assertion. The findings also support McCloskey (2016) who concluded football increased the percentage of male undergraduate students at the two schools in his study.

Conclusions

This study examined the impact of adding an intercollegiate football team on first-year male student enrollment and gender balance at NCAA Division II, NCAA Division III, NAIA, and NCCAA institutions. Adding football in non-Division I institutions has a positive impact on enrollment, increases male enrollment, and results in a difference in the male to female gender balance. This study expanded the scholarship on the connection of intercollegiate athletics and enrollment.

Implications for action. The results of this study may benefit college presidents, directors of athletics, enrollment managers, and other educational leaders looking for initiatives to help grow enrollment at non-Division I institutions. Despite the recent expansion of intercollegiate football teams, there are significant numbers of higher education institutions that do not offer the sport. The National Center for Education Statistics (2019b) reported there were 3011 four-year institutions of higher education in

2015 and the National Football Foundation (2017) reported only 777 fielded an intercollegiate football team. Further, the Equity in Athletics Data Analysis (EADA) website (2019) indicated 222 NCAA Division II and III institutions and 100 NAIA institutions do not offer intercollegiate football. This study provides empirical support indicating that adding intercollegiate football increases new male student enrollment in the year a football team is added and increases the percentage of the incoming class that identifies as male for the same period.

Recommendations for future research. This study added to the small, but growing research regarding the impact of intercollegiate athletics on enrollment, specifically at non-NCAA Division I institutions. Future research in this area could:

- 1) Replicate this study in future years examining schools that added football after 2014.
- 2) Replicate the study for NCAA Division I institutions to determine whether major colleges realize similar changes in male student enrollment and gender balance are derived from the addition of football.
- 3) Extend this study to determine the impact of other growing or emerging sports, such as lacrosse, wrestling, bowling, or e-sports on overall enrollment, male enrollment, and gender balance.
- 4) Extend this study to examine the enrollments of the institutions which added intercollegiate football by looking at enrollment changes over a 5 or 10 year period.
- 5) Examine the economic impact of adding intercollegiate football at institutions.

- 6) Examine the motivations for adding intercollegiate football among college presidents, enrollment managers, and directors of athletics.

Concluding remarks. The Lawlor Group (2012) painted a challenging picture for private higher education throughout the ‘teens and twenties of this century. Changing demographics, varied enrollment projections, and questions about the importance of higher education provide intense pressure on tuition-dependent colleges and universities. Finding reliable sources of enrollment will become even more tantamount as these stresses increase. Football has been seen as the low-hanging-fruit of intercollegiate athletics for institutions without a team. However, the viability of football is in question too. Kleen (2019) described the challenges of professional football finding an insurance company to cover its operations in the wake of chronic traumatic encephalopathy (CTE) claims. Further, Kleen stated the feeder programs for college and professional football are in decline, “Yet across the country, youth leagues and junior college programs are folding as they fail to find proper insurance for athletes” (para. 5).

Results of this study show football has served as an option for increasing enrollment at dozens of institutions during much of the first fifth of the 21st century. Higher education leaders must be vigilant in continually seeking ways to maintain or increase enrollment. Strategic Enrollment Management requires planning and a collaborative approach as institutions strategically place themselves in the marketplace. Whether football, or other sports, can continue to bolster enrollments remains to be seen.

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Appendices

**Appendix A: Colleges and Universities That Added Intercollegiate Football Between
2005 and 2014**

School	Year Added	Membership Classification
Alderson Broaddus University	2013	Division II
Anna Maria College	2009	Division III
Ave Maria University	2011	NAIA
Becker College	2005	Division III
Berry College	2013	Division III
Birmingham Southern College	2007	Division III
Bluefield College	2012	NAIA
Brevard College	2006	Division III
Castleton University	2009	Division III
Concordia University-Ann Arbor	2011	NAIA
Dordt College	2008	NAIA
Faulkner University	2007	NAIA
Florida Technical College	2013	Division II
George Fox University	2014	Division III
Grand View University	2008	NAIA
Hendrix College	2013	Division III
Kentucky Christian University	2008	NCCAA
LaGrange College	2006	Division III
Lake Erie College	2008	Division III
Limestone College	2014	Division II
Lindsey Wilson College	2010	NAIA
Marian University	2007	NAIA
Misericordia University	2012	Division III
Missouri Baptist University	2014	NAIA
Notre Dame College	2010	Division II
Oklahoma Baptist University	2013	Division II
Pacific University	2010	Division III
Point University	2012	NAIA
Presentation College	2011	NAIA
Reinhardt University	2013	NAIA
Saint Vincent College	2007	Division III
Seton Hill University	2005	NAIA

Shorter University	2005	NAIA
Siena Heights University	2011	NAIA
Southeastern College-Jacksonville	2014	NCCAA
Southwestern University	2013	Division III
Stevenson University	2011	Division III
The College of Idaho	2014	NAIA
The College of Saint Scholastica	2008	Division III
University of New Haven	2009	Division II
Virginia University of Lynchburg	2011	NCCAA
Warner University	2013	NCCAA
Wayland Baptist University	2012	NAIA

Appendix B: Matched Institutions

Matched Institution	Location
Adelphi University	Connecticut
Alice Lloyd College	Kentucky
Barry University	Florida
Belhaven University	Mississippi
Bluffton University	Ohio
Brenau University	Georgia
Campbellsville University	Kentucky
Cornerstone University	Michigan
Dakota Wesleyan University	South Dakota
Evangel University	Missouri
Florida Memorial University	Florida
Gustavus Adolphus College	Minnesota
Holy Family University	Pennsylvania
Huntingdon College	Alabama
Lewis & Clark College	Oregon
Malone University	Ohio
Massachusetts Maritime Academy	Massachusetts
Morningside College	Iowa
New England College	New Hampshire
Northwest Nazarene University	Idaho
Northwestern College	Iowa
Nova Southeastern University	Florida
Oglethorpe University	Georgia
Oklahoma Christian University	Oklahoma
Pfeiffer University	North Carolina
Randolph College	Virginia
Rochester College	Michigan
St Thomas University	Florida
Taylor University	Indiana
University of Dallas	Texas
University of Mary Washington	Maryland
University of Mobile	Alabama
University of the Ozarks	Arkansas
Ursinus College	Pennsylvania
Washington Adventist University	Maryland
Waynesburg University	Pennsylvania
Wheeling Jesuit University	West Virginia
Wheelock College	Massachusetts
Wiley College	Texas
Willamette University	Oregon

Wingate University
Young Harris College *
Young Harris College**

South Carolina
Georgia
Georgia

* data from 2004 and 2005

**data from 2012 and 2013

Appendix C: Baker University IRB Approval



Baker University Institutional Review Board

December 12th, 2018

Dear Kevin Kropf and Tes Mehring,

The Baker University IRB has reviewed your project application and approved this project under Exempt Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

A handwritten signature in blue ink that reads "Nathan D. Poell".