



Empirical Article

Beyond the Flutie Factor: Why Athletic Success Influences Students' University Choices

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Abstract: One of the effects of intercollegiate athletic success that has been commonly studied is the impact success has on the overall institution. The increase in the quantity and quality of applicants to higher education institutions is called the “Flutie factor.” This refers to Boston College’s Doug Flutie, whose famous pass in a 1984 football game contributed to a victory over the University of Miami. To revisit and expand on this phenomenon, a qualitative research design was implemented to determine the role of athletics success in student applications and attendance at North Dakota State University (NDSU). An open-ended survey was sent to incoming, out-of-state freshmen at the university. Results were analyzed for themes around awareness and included other impacts athletics success had on their application and attendance to NDSU. The authors determined that athletic success played a role in initial awareness, the decision to attend, and community and student engagement. The Flutie factor is a known effect of athletic success, and these results further the understanding of the phenomenon, resulting in key implications in utilizing athletic success to increase applications, enrollment, retention, and financial success.

Keywords: Flutie factor, athletic success, enrollment management, college choice, higher education

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The Flutie Factor

“Three wide receivers out to the right...Flutie flushed...throws it down... caught by Boston College! I don’t believe it! It’s a touchdown! The Eagles win it! Unbelievable!” (Pumerantz, 2012, para. 24). CBS Television announcer Brent Musberger echoed the excitement of one play, a 48-yard, game-winning touchdown pass from Doug Flutie to Gerard Phelan in the 1984 Orange Bowl against the University of Miami. These 48 yards not only represented the game-winning touchdown for Boston College but also paved the way for the Flutie factor in higher education and intercollegiate athletics. This effect of intercollegiate athletic success has been commonly believed to indicate the increase in the quantity and quality of applicants to higher education institutions, as it led to a 25% increase in applicants to Boston College the following year (Sperber, 2000). According to Sperber (2000), this media attention, combined with successful athletic programs, continues to transcend all else: “Schools like Boston College continue to pursue victory in college sports, pumping millions of dollars into their intercol-

-legiate athletics programs...all in hopes of having a future Flutie moment” (p. 61).

While Sperber (2000) noted the increase in applicants from collegiate football success, the Flutie factor has been studied across several contexts with varying results. For example, Pope and Pope (2014) found significant increases in SAT scores submitted among applicants based on success at the National Collegiate Athletic Association (NCAA) Basketball Tournament level (i.e., Sweet Sixteen, Final Four, and Championship) and the overall Football Bowl Subdivision (FBS) rankings, especially within the African American student population. Furthermore, similar effects were seen on the applicant level and among overall awareness, media exposure, merchandise sales, and donations. After a 2010 NCAA Tournament upset of top-ranked Kansas, the University of Northern Iowa (UNI) reported a 30% increase in calls to the admissions office, a 268% increase in unique visitors to the university website, and a staggering 1,577% increase in online store sales just days after the March 20th victory (O’Neil, 2010). Similarly, the 16-seed University of Maryland, Baltimore County’s (UMBC) dramatic upset of 1-seed Virginia in the first round of the 2018 NCAA Men’s Basketball Tournament proved to be more than just a victory for UMBC. According to Lopresti (2020), “Months later, a check of the school found applications, booster involvement, T-shirt sales all skyrocketing” (para. 17). More recently, St. Peter’s University Cinderella run to the Elite Eight in the 2022 NCAA Men’s Basketball Tournament included not only a defeat of blue-blood Kentucky, but also secured an uptick in applications to the institution (Beck-Aiden, 2023).

Examples of the Flutie factor are prevalent in both collegiate football and basketball. Chung (2013) discovered that students with lower academic abilities tend to prioritize athletic achievements more, while those with higher academic abilities exhibit a stronger inclination towards the quality of education over their counterparts with lower academic abilities. In addition, regarding academic quality and prestige, Cox and Roden (2010) indicated that improvement in football rankings did not significantly influence the academic ranking reported by *U.S. News & World Report*. While winning a championship may lead to enhanced academic factors at a university, the authors did not find similar results in SAT scores, freshman retention, or graduation rates based on a university’s football performance.

Although this effect has been studied, little has been identified as to *why* students choose to attend universities for athletic success and how universities can utilize athletic success to promote their institution. In previous examinations, simple awareness of the school has been attributed as the main reason for the Flutie factor. As Pope and Pope (2014) speculated,

High school students are likely to have had substantial exposure to major colleges in their state. Thus, when a sports team from a college does well, it is likely to cause a larger shift in awareness for out-of-state students than for in-state students. (p. 124)

However, other factors may be important to consider. For example, do the prospective students associate increased prestige with the university because of athletics success? Some successful collegiate athletic programs may appear trendier than others, including using blue turf at Boise State University. At the same time, Kansas’s Rock Chalk chant and Duke’s Krzyzewskiville exemplify traditions that may lead to a larger shift in awareness for out-of-state students mentioned by Pope and Pope (2014).

While these successful programs and traditions have existed for some time, it is important to consider the new technologies that may allow these universities to be more readily discovered compared to the initial Flutie factor effects in the 1980s. This includes sports media coverage around the clock, increased sports programming, social media technologies, and easier access to information. While college decisions in the past were made for geographic reasons, including remaining near their homes or warmer climate, “in the age of national TV, increasing numbers of high school seniors, particularly those seeking to participate in a collegiate subculture, apply to schools with winning sports programs” (Sperber, 2000, p. 64).

Furthermore, athletic success and association with these winning programs provide interesting connections to social identity theory (Tajfel & Turner, 1986) and understanding fan and (in this case) student behavior. Social identity theory states that people define and evaluate themselves based on the groups with which they associate. In sport terms, this comes in the form of basking in reflected glory (BIRGing) or cutting off reflected failure (CORFing; Cialdini et al., 1976). In other words, fans tend to identify more strongly with successful teams, using this association for self-presentational benefits. End et al. (2002) noted that “the team that wins is perceived as being more favorable than the team it beat, helping someone who identifies with the team achieve a positive social identity” (p. 1019). College students were more likely to wear their university’s apparel and use “we” when referring to a team after their school’s victory than after their team’s loss (Cialdini et al., 1976). This illustrates the potential impacts athletic success has on a university and its students while magnifying implications for administrators.

Combined with the Flutie factor, these phenomena have significant implications for utilizing athletic success to increase applications, enrollment, retention, and financial success. The authors provided more depth to this phenomenon by qualitatively investigating what role athletic success plays in student enrollment, whether due to increased awareness, social bonding, community engagement, or other previously unspecified reasons. As colleges and universities continue to raise tuition and increase fundraising efforts, these results can help scholars understand the out-of-state student dynamic and their student attendance decisions.

The purpose of this study was to (a) understand student motivation in applying to and attending a university with athletic success and (b) research its impact on awareness, the decision to attend, and student community engagement. The researchers sought to understand why the attractiveness of collegiate athletic success plays a role in the decision to attend a university, how success contributes to the college community and student engagement, and the implications for enrollment management administrators, specifically regarding out-of-state students. This study examined the case of North Dakota State University (NDSU), located in Fargo, North Dakota. NDSU was an ideal fit for the study. It was chosen because of the continuous success of the football program at the FCS level and outside factors including its location away from major metropolitan areas. The literature review provides an overview of studies on collegiate success and institutional enrollment and the effect on college choice, admission factors, academic rankings, academic prestige, and academic perception.

Literature Review

College Selection Process

Several factors affect the overall enrollment decisions facing incoming first-year college students. Often, the characteristics of incoming first-year students influence policymakers' decision-making regarding educational equality and access. In fact, many parents and families utilize college rankings, such as the *U.S. News and World Report* rankings, to determine which institutions are attracting the top students (Kinzie et al., 2004). For many reasons, how students choose colleges and the factors influencing those choices have become important to diverse segments of American society.

To fully grasp the Flutie effect, it is necessary to understand the college choice process. Hossler and Gallagher (1987) emphasized the importance of this process and its effect on students. The authors described college choice as a process in which high school students aspire and decide to attend a specific educational institution past high school, whether it be a college, university, or vocational school. College choice has led to the development of several models that help describe the development of making a college decision (Hossler et al., 2003).

The college choice model is a developmental model that suggests a three-phase process: predisposition, search, and choice (Hossler & Gallagher, 1987). The first stage is labeled as the *predisposition phase* and is the stage in which students decide whether they are interested in continuing into higher education after high school. If they wish to do so, students enter the *search phase* or a period in which they obtain information regarding higher education institutions they may be interested in. In this phase, students determine which 'choice set' of institutions they intend to apply for admission. The third stage involves *choice* and deciding which college or university the student will attend (Hossler & Gallagher, 1987).

Hossler and Gallagher (1987) suggested that college choice is a complex phenomenon that admissions, marketing, and financial aid decision-makers should carefully analyze as part of their recruitment activities. However, professionals in higher education, including admissions and marketing personnel, view:

All their recruitment activities as influencing the selection of one institution over another. This means that they are directing their efforts at the choice phase, when in fact, the most critical phase is the search phase. The best way for institutions to expand their applicant pool is to reach students at the search phase (Hossler & Gallagher, 1987, p. 218).

Hossler and Gallagher (1987) turned to early recruitment as an effective method in seeking prospective students prior to their senior year of high school. Hossler et al. (2003) recognized the importance of college choice. They suggested that where students choose to complete their education beyond high school has significant outcomes, not only for the individual but also for society. Therefore, it should drive the interest of policymakers in the postsecondary setting.

Hossler et al. (2003) stated that college characteristics and admissions selectivity are important in the college-going model advanced by Kohn et al. (1974). Moreover, a range of college attributes such as size/graduate orientation, masculinity/technical orientation, ruralness, fine arts orientation, and liberalness are also suggested as important factors in college choice (Chapman, 1979). A college choice model tailored to prospective students of traditional age was also introduced. The decision of which college to attend is influenced by the characteristics and

background of the student, the student's family, and "by a series of external influences. These include the Influence of significant persons, the fixed characteristics of the college, and the Institution's own efforts to communicate with prospective students" (Chapman, 1981, p. 503).

Understanding the college selection process can expand our knowledge of students' choices, paving the way for improved financial aid policies, enhanced high school guidance counseling practices, and more effective college or university marketing strategies. This, in turn, creates a more accessible college selection process for students as they work to find the right fit (Hossler et al., 2003). This can provide further consideration, especially for collegiate athletic departments with successful programs. However, there has been little research on the college choice model as it fits within the athletic success of an institution, although the benefits of athletic success and student enrollment have been studied. Before proceeding into the academic and financial influences of academic success, it is important to understand the overall revenue model within the collegiate athletics realm.

Collegiate Athletics Revenue

Collegiate athletics have long been a source of revenue for programs and institutions across the country. Several studies have identified the significance of financial resources within collegiate athletics and its importance. Hoffer et al. (2015) noted substantial investments in maintaining high-quality collegiate athletics programs. One of the primary purposes of recruiting high-level student-athletes to play men's basketball or football is that monetary compensation is not allowed. Furthermore, success on the playing field is typically associated with added financial benefits, including ticket, merchandise, concession sales, parking, television broadcasting deals, booster donations, and playoff/bowl appearances (Hoffer et al., 2015). One of the top revenue-producing avenues for collegiate athletic programs is the football bowl payouts (Hoffer et al., 2015). Since the beginning of the College Football Playoff (CFP) format in the 2014-2015 season, each NCAA Power Five conference has made over \$650 million from annual bowl revenue distributions, with the Southeastern Conference (SEC) topping the list at \$765 million earned since 2014-2015 (Akabas, 2023). These successes on the playing field have also shown increased applications, increased state appropriations, and other benefits to the institutions, which will be discussed further.

Hoffer et al. (2015) cited Bowen's (1980) revenue theory of costs in higher education to intercollegiate athletics, applied when "nonprofit colleges and universities collect revenues from students in the form of tuition and fees and set expenditure to always equal this revenue. When revenues rise, expenditures increase in lockstep" (p. 577). The authors noted significant increases in revenues within intercollegiate athletics that can allow the revenue theory of costs to be applied in which "the observed increases in intercollegiate athletic expenditure occur across all big-time athletic departments because they set expenditure equal to revenue and have experienced large revenue increases" (Hoffer et al., 2015, p. 577). This research on collegiate athletics and the revenue involved is only a snapshot of what takes place within these athletic programs in terms of revenue. Along with this brief overview, additional studies are presented to illustrate admission factors and achievements related to academic success.

Admission Factors and Academic Achievement

One of the first studies conducted regarding athletic success and academic standards was McCormick and Tinsley's (1987) work on athletics and academics as evidenced by SAT scores. The authors concluded that a symbiotic relationship between athletics and academics is evident on many college campuses. They suggested that discontinuing extensive athletic participation could, for a given school, negatively impact both enrollment and academic standards. However, the authors provided unanswered questions regarding their results, "For instance, why do some universities invest in top-quality athletic programs and others choose not to?" (p. 1108). Another example was, "The Ivy League institutions, among others, have not recently placed great emphasis on big-time athletic success possibly because their unrivaled academic tradition does not require the low-cost advertising provided by a nationally competitive athletic program" (p. 1108). Additionally, the researchers asked whether old, rich, and privately endowed schools with high academic rankings were the only ones that did not find athletics important to survival (McCormick & Tinsley, 1987).

Weistrop (2010) observed a positive impact on the number of applications following a national championship victory, but results were less conclusive at institutions of runner-up and 'Cinderella' teams. Interestingly, the positive effect was more pronounced for females than males. On the flip side, negative effects were apparent for admissions and enrollment of champion and runner-up teams. In addition, a positive effect was noted for admissions and enrollment of Cinderella teams. According to Weistrop (2010):

For most universities, athletics is a losing proposition. Due to the negative return on investment for athletics, it becomes harder for schools to justify maintaining the school's athletic budget. If the applicant pool improves due to the attention given to athletics and specifically basketball, then it becomes easier to justify maintaining athletics. In addition, there has been disagreement amongst academics of whether or not there is an effect on applications because of athletic success (p. 65).

Media exposure generated from football and basketball teams of high-profile college programs can be a strong advertising tool for higher education institutions. Per Pope and Pope (2014), on-field success may have a greater influence than academic success at the institution. In fact, prospective students are likely to be made more aware of a successful athletic performance, for example, during a Final Four appearance, than the hiring of a world-renowned professor (Pope & Pope, 2014).

It should be noted that college sport success differs from other economic variables related to college application decisions. College sports success may not be directly related to the quality or cost of an academic environment at a given university (Pope & Pope, 2014). The authors' study on SAT test score submissions found that schools with a 'good' sports year saw a dramatic increase in submitted SAT scores the following year. For schools invited to the NCAA basketball tournament, there was an average increase in submitted SAT scores in the range of 2% to 11%, depending on how far the team advanced in the tournament (Pope & Pope, 2014). The top 20 ranked football teams also experienced similar increases, between 2% and 12%, the following year. The authors conducted a heterogeneity analysis that showed more responsiveness to athletic success for Black males, out-of-state students, and students who played football or basketball in high school (Pope & Pope, 2014).

Similarly, Chung (2013) posited that students with lower-than-average SAT scores have a stronger preference for athletic success. In contrast, students with higher SAT scores have a greater preference for academic quality. Furthermore, Chung (2013) found that students with lower academic ability based on SAT scores were more likely to value a successful intercollegiate athletics program over their higher-ability peers. The low-ability students were also part of the vast portion of the 17.7% increase in applications seen at schools that went from mediocre to high performance on the football field. Highest ability students also contributed to the increase in applications (Chung, 2013). It is interesting to note that to attain similar effects:

A school must either decrease tuition by 3.8% or increase the quality of education by recruiting higher-quality faculty who are paid 5.1% more in the academic labor market. [Chung] also find[s] that schools become more selective with athletic success. For the mid-level school, in terms of average SAT scores, the admissions rate would decline by 4.8% with high-level athletic success (Chung, 2013, p. 681).

The increased selectivity with athletic success is further illustrated in national academic rankings.

Cox and Roden (2010) concluded that the average *U.S. News & World Report* college ranking improves significantly in the two years following a national championship victory compared to the two years prior. In line with earlier research, this improvement was accompanied by increased applications, lower acceptance rates, and higher average SAT scores (Cox & Roden, 2010). However, when examining a larger sample that included athletic departments without championship wins, there was no significant relationship between sports performance and academic rank. This raises questions about the effectiveness or efficiency of striving for athletic success as a way of improving academic rankings, like those found in the *U.S. News & World Report* (Cox & Roden, 2010).

Alter and Reback (2014) reported that reputations could either increase or decrease demand while addressing academic and quality-of-life rankings. First, and most closely related to Cox and Roden's (2010) study, "inclusion in selective academic lists (i.e., PR's Top 20, *U.S. News* rankings of universities) is followed by an increase in applications, suggesting that front-of-book advertising may be important in the initial phases of the college search process" (Alter & Reback, 2014, p. 365). The authors also discovered significant shifts in the demand for specific colleges and universities based on overall quality-of-life ratings. Unfavorable quality-of-life ratings seem to have a detrimental impact on college demand, resulting in a decrease in interest or preference for these institutions. (Alter & Reback, 2014).

Although most studies showed an increase in overall academic achievement, Lindo et al. (2012) found a negative relationship between the success of the University of Oregon football team and the academic performance of students as measured by grades. Using data from Clemson University, Hernandez-Julian and Rotthoff (2014) found that the football team's winning percentage is negatively related to academic performance. The authors noted that, although Lindo et al. (2012) determined a greater sensitivity to change in academic performance based on winning percentage for male students versus female students, the opposite effect was found in the Clemson data. In this case, there was a negative relationship between wins and academic performance that persisted into the spring semester at the institution.

Dykstra (2013) also found that some measures of athletic success may or may not increase applications, and if so, it may only result in a marginal difference. Additionally, Hansen's (2011) research showed that athletic success can influence the college choice process; however, "athletic success does not appear to have a larger role in the college decision process than traditional college choice factors, such as reputation of academic programs and major choices offered by a college or university" (p. 65). Interestingly, Castle and Kostelnik (2011) were also able to investigate athletic success and the quality and quantity of freshman applications at the NCAA Division II level. The results showed a significant impact on the quantity of applications and the quality of those who enrolled due to athletic success at all 14 Division II institutions in the study (Castle & Kostelnik, 2011).

Literature has also determined the existence of a relationship between athletic success and student retention and graduation rates. Mixon and Trevino (2005) concluded that football success contributes to a significant increase in freshmen retention and graduation rates while providing students with "a respite from the psychic costs associated with college life" (p. 97). Jones (2010) indicated similar results in illustrating the importance of college athletics and football team support as a tool for increasing social integration, which Pascarella and Terenzini (1983) identified as an important factor in educational persistence and retention rates. Furthermore, this importance extends far beyond the athletic realm as freshmen graduation and retention rates are often utilized in implementing performance-based funding practices in state legislatures and higher education boards (Mangold et al., 2003). Although the Flutie factor has been shown to increase overall applications based on athletic success, the following studies have challenged this idea within specific groups and types of universities.

Challenging the Flutie Factor

Brunet et al. (2013) examined faith-based institutions and discovered that the presence of an athletics program had minimal influence on the enrollment decisions of freshmen. Approximately 87% of surveyed students indicated they would have chosen the same institution even if it lacked intercollegiate athletics. Moreover, nearly 60% of intercollegiate athletes and 40% of scholarship athletes expressed a similar sentiment. Additional findings showed "roughly 13% of all freshmen student participants reported the existence of successful intercollegiate athletics was very important, 25% reported it was somewhat important, and 61% reported it was not important when making the decision to enroll at the university" (Brunet et al., 2013, p. 88). For the majority of students, including student-athletes, these findings illustrate the importance of other factors outside of the existence of intercollegiate athletics as reasons for attending an institution (Brunet et al., 2013). This is a noteworthy result, as many of the student-athletes at these faith-based institutions would not have changed their college option whether they had an athletic program or not, and "variables such as academic reputation, student life programs, religious affiliation, size, financial assistance, and graduate job placement could have influenced these decisions" (Brunet et al., 2013, p. 88).

Similarly, Perez (2012) explored athletic success in terms of local student enrollment and presented evidence that the overall success of a college athletics program did not independently affect local high school graduate enrollment at an institution. However, the success of the football and men's basketball programs at Division I universities did show a positive effect on enrollment

of local students to the institution. In this study, two regressions were presented: one that controlled for campus economic conditions, including fees over a short period, and one with variable economic conditions and a longer period (Perez, 2012). In both regressions, the number of wins for the football as well as the men's basketball programs affected the overall attendance at their local university (Perez, 2012).

Peterson-Horner and Eckstein (2014) studied high school seniors when making college attendance decisions. They determined that collegiate athletic success is relatively unimportant in attendance but may affect the decision to apply. Interestingly, the only factor that high school seniors found less important than collegiate athletics was whether their parents were legacies or alumni of the institution (Peterson-Horner & Eckstein, 2014). Certain demographics also played a role in the impact of athletic success on college student selection. Peterson-Horner and Eckstein (2014) determined that "men were more likely than women to use sports as an important selection criterion (14.9% vs. 8.7%) and Blacks were twice as likely as any other racial or ethnic group to think sports was important (20% vs. 10%)" (p. 15). The data from this study suggests that administrators may want to reconsider the Flutie factor's validity, as the researchers are not convinced of the impact on college selection based on high-visibility sports (Peterson-Horner & Eckstein, 2014).

Finally, in a recent study, Pond and Greenwell (2023) examined perceived football and men's basketball success and its effect on a sense of community regarding athletic success and enrollment satisfaction. The authors found that the success of football and men's basketball teams did not significantly predict the prominence of the university's athletics in a student's decision to enroll. On the other hand, student perceptions regarding the success of the aforementioned sports teams at the university did serve to predict a sense of community (Pond & Greenwell, 2023). Although some of the literature regarding the Flutie factor may contradict prior research, other areas outside of application quantities and a sense of community illustrate the effect that athletic success has on academic achievement and perception.

Academic Perception

External academic perception is a factor for scholars to examine when determining whether academic prestige is affected by athletic success. Clopton and Finch (2012) provided interesting findings on broad-based athletic success versus the high-profile success of revenue-generating football and men's basketball. The researchers found that considering athletic success broadly as a program had a positive impact on perceptions of academic prestige; however, when focusing on men's basketball and football success individually, there was no effect (Clopton & Finch, 2012). Clopton and Finch (2012) noted that:

While current students may be affected by their insider view of campus life, it is important to note that perception may still be more important than reality for outside stakeholders, such as fans and potential students. Outsiders' views of the quality of the school have been shown to be influenced by successful athletic programs. Likewise, potential students take into account their brand image of the university, which is also impacted by athletic success failure (p. 90).

This discovery leads to issues related to prospective students and academic prestige. Although incoming students may perceive academic prestige at an institution because of athletic success, that may not translate to actual academic prestige due to their perception (Clopton & Finch, 2012). Per Clopton and Finch (2012), this may result in “universities [running] the risk of luring students to their schools at the expense of potentially jading them later in their academic experience” (p. 90).

According to Goidel and Hamilton (2006), considerable attention has been paid to athletic success and the academic quality of an institution; however, little exists in terms of academic perception and whether incoming students or the general public believe in the connections. Goidel and Hamilton (2006) found that a sizeable proportion of the population connects athletic success to academic quality. Furthermore, the population that makes such a connection is less educated, has the least information about colleges and universities, and is least likely to support an institution if it lacks a high-level athletic program (Goidel & Hamilton, 2006).

In the study conducted at Louisiana’s colleges and universities, the institutions with greater athletic success were rated more favorably regarding academic quality perception and were more likely to support increased educational spending (Goidel & Hamilton, 2006). Overall, it would appear that “colleges and universities reap a public relations benefit from their athletic programs. Through athletics, they gain support from constituents who would otherwise have little interest in higher education” (Goidel & Hamilton, 2006, p. 861).

One of the few studies that have explored administrator and faculty perception at peer institutions is Mulholland et al.’s (2014) study, which analyzed the peer assessment category in the *U.S. News and World Report’s America’s Best Colleges* rankings. In this study, Mulholland et al. (2014) found that

Universities fielding a Football Bowl Subdivision (FBS) team are more highly rated by administrators and faculty at peer institutions. Universities are also more highly rated if their football team receives a greater number of votes in either the final Associated Press or Coaches’ Poll. (p. 79)

Not surprisingly, a university football team’s success can influence perceptions of the strength of a university beyond just the playing field.

As past literature has primarily supported the idea of the Flutie factor, the purpose of the current study was to understand how athletics played a role in students’ decision to apply, attend, and subsequently engage in the university community. Furthermore, past research on the Flutie factor has focused on quantitative approaches. In this study, a qualitative approach was used to provide a greater understanding of why students are impacted by athletic success.

Methodology

The above literature review provided an in-depth look at the available research on collegiate athletic success and institutional enrollment. Factors such as college choice, academic rankings, academic prestige and perception, and financial impact were reported. In this study, the

authors used North Dakota State University (NDSU) as the setting to examine *why* the Flutie factor exists. This institution was chosen due to the following reasons: (a) its football athletic success, winning the NCAA Division I Football Championship Subdivision (FCS) championships five straight times from 2010-2015 and then again in 2017-2019 and 2021, (b) its location is in the fourth least populated state in the United States (U.S. Census Bureau, 2020), and (c) its location is over 600 miles away from Chicago, the nearest major metropolitan area above a population of one million (City-Data, 2023). The location of NDSU is important in understanding the reasons behind a student's decision to attend an out-of-state university distant from large cities.

NDSU is a public research university located in Fargo, North Dakota, with an annual Fall 2023 term enrollment of 11,952 (NDSU, 2023b) and home of an FCS national champion football team that has beat multiple FBS programs on national television. With nearly 60% of the 2,491 first-time freshmen enrolling at NDSU in the 2021-2022 school year being from out-of-state or international students (NDSU, 2023b), there exists an opportunity to discover whether athletic success may have drawn these students to an out-of-state school in a small, urban environment.

NDSU has seen steady application rates from Fall 2011 to Fall 2022. Its lowest application rate during this time frame was 4,649 in Fall 2011, while the highest of 8,535 applicants occurred in Fall 2022 (NDSU, 2023a). While Fall 2011 provided the lowest application rates during that period, it contained the highest application rates prior to Fall 2012. Between 2011 and 2017, application rates have not increased steadily but rather have increased and decreased each year (NDSU, 2024). However, since Fall 2018, the number of applicants has increased each year for first-time freshmen before decreasing slightly in Fall 2023 (NDSU, 2023a).

In the current study, the researchers conducted open-ended surveys with a phenomenological approach, allowing them to “seek to explore, describe, and analyze the meaning of individual lived experience” (Marshall & Rossman, 2016, p. 17). The college choice and attendance, including the Flutie factor, can be seen as a phenomenon for students in their decision-making process. This approach allowed the researchers to understand the lived experiences from the participants' perspective while focusing on their motives and actions related to their decision to attend NDSU (Lester, 1999). The researchers understood that each participant has a unique experience. Therefore, the phenomenological approach was most effective in capturing “personal knowledge and subjectivity, and emphasis[ing] the importance of personal perspective and interpretation” (Lester, 1999, p. 1).

A qualitative research design was implemented to determine athletics' role in students applying to and attending NDSU. An open-ended survey was sent to first-year students (N=2,503) using a Microsoft Office mail merge with contact information provided by the administration at the university via an Excel document. An online, open-ended survey was created using Qualtrics software due to the accessibility of participants and the convenience of data collection. The survey was sent via email to the contact information provided by the enrollment management administration at the university. The survey included a series of demographic questions along with open-ended questions to obtain input on athletic success and its impact on initial awareness, decision to attend, and community engagement (see Appendix).

Of the surveys sent, the researchers received 196 responses ($N = 196$), representing a total response rate of 7.71%. The participants included 73 in-state students (37.24%), 118 out-of-state students (60.20%), and five international students (2.55%). Participants were primarily White (92.68%), Asian (2.44%), and African American (1.46%).

The results were analyzed by the authors using the reports section of the Qualtrics software. As results were presented in survey format, quotes were transcribed directly by participants using this software. The open-ended survey responses were analyzed using open coding to identify emergent themes, beginning with awareness and then identifying other impacts athletics' success had on their application and attendance to NDSU. Both deductive and inductive reasoning were used during open coding analysis (Corbin & Strauss, 2008). Prior themes from existing literature and theoretical frameworks were utilized in the independent coding of responses. Furthermore, new themes emerged by observing prompt responses around initial awareness, decision to attend, and community and student engagement. Once themes were analyzed, representative quotes were chosen to display appropriate justification for themes and results. These representative quotes were presented verbatim and applied to discussion and previous literature.

Results and Discussion

A total of 196 students responded to the study, including 118 out-of-state students (60.20% of the total sample) and five international students (2.55% of the total sample). Out-of-state students represented ten states, primarily in the upper Midwest, including South Dakota, Minnesota, Nebraska, Iowa, Wisconsin, Illinois, California, Texas, and Maryland. International students represented three countries: Germany, South Korea, and Canada. All respondents were first-year students, as determined by the university. Given the purpose of this study, the out-of-state, first-year students were found to be most relevant. It is important to note that no NDSU student-athletes were part of the participant group.

The analysis of open-ended survey data led to identifying themes relating to awareness, the impact of athletic success on attendance, and the role of the athletics community and student engagement on campus. Past literature has primarily suggested that the Flutie factor contributes to increased levels of awareness of the institution, which leads to increased applications (Chung, 2013; Cox & Roden, 2010; Weistrip, 2010). However, the results of the current study attempted to go beyond the Flutie factor as NDSU athletics contributed to the respondents' initial awareness of the institution or decision to attend, and played a role in the overall campus environment, community, and student engagement. The following discussion will delve deeper into student responses by summarizing results and presenting representative quotes. The aim is to gain a thorough understanding of the reasons behind the Flutie factor and explore its implications for optimizing enrollment management through athletic success in higher education institutions.

Awareness

When asked about the contribution of athletic success to initial awareness of NDSU, respondents attributed athletic success, primarily football, to their initial awareness and interest in the university. For many participants, athletic success placed NDSU on their list of schools to apply to. As one student stated, "The success of the football team over the past five or six years

was what first got me interested in the school.” Similarly, the football program also encouraged students “to look at [NDSU] in further detail” and “put it on my search radar.” Furthermore, the data supports Peterson-Horner and Eckstein’s (2014) claim that collegiate athletic success might be unimportant in attending; however, athletic success can affect whether the student applies to the university. This, however, does provide an opportunity for institutions to capitalize on the awareness that is generated by their athletics programs through different means, including their academic programs and student life. This data further supports Alter and Reback’s (2014) study, illustrating the importance of “front-of-book” advertising in the initial phase of the college search process. This initial awareness opens the door not only for the students to explore the institution but also for higher education administrators to exhibit different aspects of their universities in hopes of further influencing the student’s decision to attend due to athletic success.

While athletic success did play a role in initial awareness, the students reported that they were made aware long before the college search process. According to one student, “The success of the Bison football program made me aware of NDSU long before I started looking at schools to attend.” These statements align with Pope and Pope’s (2014) idea that athletic success will likely generate a more significant effect on awareness for the out-of-state students rather than their in-state counterparts because in-state students generally face exposure during high school to major colleges located in their state. The initial awareness of NDSU due to football success resonated with out-of-state students as “It made me aware of the school. The football team playing in the playoffs was the first time I had heard of NDSU” and “I wouldn’t have known about NDSU had I not known about their football.”

Interestingly, those students who reported that their initial awareness came from other factors besides athletic success, including specific academic programs, family alumni, and friends, were still aware of the success of the Bison football program. One student noted, “I was aware that the Bison had been doing very well in football, but I was aware of the school because of some family friends who work at NDSU.” Similarly, other students relied on outside influences, including high school personnel who were fans of Bison athletics, noting, “My high school math teacher was a Bison fan, and that led me to look into the school.” This result shows how much a collegiate athletics program can indirectly contribute to the student’s awareness of an institution. While athletic success specifically was not the prime reason for the student’s initial awareness in these cases, the importance of athletic programs in general as a means for awareness is still prevalent. This result has shown student awareness of NDSU through various athletic and outside influences, which leads to a shift in institutional culture and their athletic departments through consistent sport media coverage.

Past research has demonstrated the importance of media exposure as a strong advertising tool more powerful than academic success (Pope & Pope, 2014). This was presented in the current data when one student stated, “The successful athletic teams drew attention to the school, and with all the attention through media it made me feel like NDSU has a very fun and supporting student body.” Although media plays a strong role as an advertising tool, a cultural shift of 24-hour coverage, instant media, internet consumption, and increased television coverage may have contributed to the lack of initial awareness presented by athletic success. While admissions offices feature successful sport programs in their marketing materials, the media also “pours out constant information about them, the volume increasing enormously as ESPN and other all-sports outlets

expand” (Sperber, 2000, p. 63). The consistent sport programming from the likes of ESPN, its sister channels, and beyond has made it more difficult to be unaware of a school due to its athletic success. NDSU football has seen success on the championship level from 2010-2015, again from 2017-2019, and most recently in 2021, with championship games televised on national media. In 2019, NDSU’s victory against James Madison University in the NCAA Division I National Championship Game was the most-watched FCS game ever, with over 2.68 million television viewers (Associated Press, 2020). This leads the researchers to believe that with consistent success year in and year out, the effect of the Flutie factor may be diminished after continued achievement.

Decision to Attend

When asked about the impact the success of NDSU had on their decision to attend, students reported that the athletic program at NDSU was not the primary determining factor. Still, it played a role in enhancing overall confidence in the decision to attend. However, it is interesting to note that although athletics alone affected the students’ decision to attend, several respondents indicated the success as a bonus. As one student emphasized, “It had minimal effect. Academics come first, but enjoying a good sports team was like icing on the cake.” Other students had similar responses in determining that it “was just a small bonus that athletics are successful, and that people get excited over them” and “it wasn’t the main inference, but it was a pleasant addition.”

Similar to the initial awareness of the institution, students noted the importance of the academic programs as the main impact on their decision to attend but continued to place a small influence on the role of athletics. One student based their decision on “the low overall cost and good STEM programs,” while another decision was based “on a good pharmacy program, but the idea of going to a school with high notoriety in sports was influential” and “it made me want to be a part of a national championship crowd.” These responses laid a consistent message in allowing the authors to conclude that, in this case, athletic success likely played an indirect role in the decision to attend. Although these results show a greater initial awareness from athletic success than an impact on the decision to attend, ultimately, higher education administrators are interested in whether the students are attending the university.

These statements illustrate Chapman’s (1981) model of student college choice and suggest that although athletics play a role in some level of awareness, “student college choice is influenced by a set of student characteristics in combination with a series of external influences” (p. 492). Higher education administrators can use this information to emphasize the information their students are using to base their admissions decisions. For example, some students may view athletics as an unfavorable admissions tool. When asked about the impact of athletic success on their decision to attend NDSU, one student noted, “Not at all, and I wish [they] would shut up about it. When I am visiting a college, I don’t want to hear about [their] sports I would love to hear more about the actual college.” Another student wishes NDSU’s “football team was less successful and less known because all it does is make attendance skyrocket, increase student fees, and attach a stigma to going to school here.” According to Chapman’s (1981) model:

The way an institution describes itself through its printed materials is one of the relatively few ways a college can exercise direct influence on prospective students’ choice. For an institution needing students, then the efficacy of printed information may hold important

consequences (p. 491).

Today, students receive information from a variety of sources, whether in print or online media.

As admissions administrators attempt to draw in students to their universities, it is important to hold an open-minded view of their interests. Keeping that in mind, athletic success still played a role in the decision to attend for 28% of respondents (34 students). When examining the open-ended survey results, one student said:

I [think] having a football program (at that a successful one), is critical for school pride and is a key reason I attended NDSU. One of the only reasons I [wouldn't have] attend[ed] NDSU is because of the lack of [a] hockey program.

The sense of pride associated with a high-performing football team was described as a key attendance indicator for multiple participants.

Similarly, watching “good football influenced my decision slightly because that was something I enjoy and would be giving up away from Nebraska.” Unlike initial awareness, the importance of athletics for some students extends far beyond football. Surprisingly, this type of reaction did not only involve revenue-generating sports. One student described the importance of softball and stated:

I was involved with softball in High School, and I wanted to go to a college that had a softball team. I'm not on the team, but I will definitely be going to a lot of the softball games, and I will be doing intramural softball.

Participants indicating sports outside of revenue-generators, like football and basketball, help paint a picture of the importance of success across all athletic departments.

For example, some students detailed the broader success of NDSU's teams on their decision to attend. One participant noted, “I definitely think the success of all the teams impacted my decision to attend NDSU.” Similarly, the support of NDSU's teams was the primary impact of this high school athlete's decision to attend and said, “I played sports in high school, so seeing all the support for the athletic teams at NDSU made me want to be part of the action” and “other programs lack the same kind of respect, prestige, and winning culture that NDSU does.” The idea of basking in reflected glory, or *BIRGing*, is evident in the participant's enthusiasm in cheering for NDSU athletics and “wanting to be part of the action” as they associate themselves with the success of the athletic programs (Cialdini et al., 1976).

The results presented in this study are important to college administrators interested in gaining a greater understanding of the factors that attract high school students to their institutions to develop strong marketing strategies and practices. The results of athletic success and the decision to attend go beyond the effects of the Flutie factor and challenge its importance in college choice for students.

Community and Student Engagement

When asked about the role NDSU athletics plays on campus in terms of community and student engagement, students overwhelmingly expressed the importance of athletics in promoting a strong campus community and school spirit. Common words or phrases mentioned in the responses included “family,” “community,” “school spirit,” “brings people together,” and “meet new people.” Although there are several clubs and organizations on campus that may drive student engagement, athletics “creates a wonderful happy environment where we feel united, rooting for the same thing.” The sense of community stretches among layers of the university “to come together freshman [through] graduate students and beyond with our own professors and alumni,” and even for those who do not express a large interest in sport, “Everyone cheers on the team even if they aren't huge sports fans. It really brings all the students together.”

Similarly, students reported NDSU athletics as a channel for making new friends, which can be important in college adjustment and persistence, especially for first-year students. For one student, the athletics experience played a role even before enrolling at the university, in which “the football games were my favorite part of my visit typically, and then once I got here. Athletics is a great way to instantly become friends with others in your similar situation of balancing school and a sport.” Furthermore, one student acknowledged the student bond and believed:

...that NDSU athletics (especially Bison football) brings the student body closer. I love sports and I always will, and it's so fun to meet new friends who are also into sports and cheer alongside them for our teams.

This bond and sense of friendship stretched beyond the reach of campus. Students are well aware of the sense of pride NDSU athletics provides not only to the campus community but the greater Fargo community as well. NDSU athletics “makes Fargo a proud community” and was referred to as “the staple of the Fargo community.” Students suggested that NDSU athletics “make[s] you feel a part of the bison family right away” and “gives everyone a sense of home.” Social identity theory suggests that a sense of self is often associated with membership in social groups (Tajfel & Turner, 1986). This aligns with the participant's feeling of belonging to the “Bison family” through NDSU athletics. This also helps illustrate a sense of collective identity, which extends beyond campus and into the Fargo community.

Limited research exists on collegiate athletic success and retention rates, especially at the NCAA Division I FCS level. These results add to the body of literature, demonstrating the importance of athletic opportunities and success on positive student experience, community, and engagement, which can ultimately affect student retention at the institution. This sense of belonging, family, and community students feel exhibited by NDSU's athletic program can help drive socialization and integration in college life. It is important to higher education administration in developing student recruitment materials, first-year programs, and retention plans. The results suggest that students engage in athletic events to develop a powerful social community, and a strong sense of belonging and identification with the university. Existing research tells a similar story as Mixon and Trevino's (2005) study provided “strong support for the notion that college/university graduation rates are significantly influenced by football success” (p. 101). Jones (2010) indicated that “campuses with greater support of their college football team have higher retention rates...and provide some support for the theory of college athletic as a tool for increasing social integration and student retention” (p. 462). Furthermore, former State University of New

York at Buffalo President William Greiner explained, “You do [big-time] athletics because...it is certainly a major contribution to the total quality of student life and the visibility of your institution,” where quality of student life is “often a code word for student partying in conjunction with college sports events” (Sperber, 2000, p. 65).

Higher education theory points to the importance of student integration, both academic and social, on educational persistence and retention rates (Pascarella & Terenzini, 1983; Tinto, 1997). The contribution of collegiate athletics on social student integration justifies the increased costs of maintaining a high-level collegiate athletic program. According to Mangold et al. (2003):

Although the use of retention and graduation rates as measures of performance indicators have been criticized, many state legislatures and boards of higher education nevertheless link freshman retention and graduation rates to university budgets as a component of performance-based funding (p. 540).

Although using freshmen retention and graduation rates as platforms for performance-based funding is common in higher education, it is important to note that institutions with greater athletic success are likely to support increased educational spending as well (Goidel & Hamilton, 2006).

Similarly, the sense of community and student engagement exhibited by NDSU athletics can help justify its importance through the public relations benefit from their athletic programs that drive support from students who would otherwise not be interested in higher education (Goidel & Hamilton, 2006). Furthermore, colleges and universities typically like to attract out-of-state students because they pay higher tuition and help the state economy after graduation, which can lead to improvements in alumni activity. This increases financial contributions and donations while enhancing the school’s overall success.

Limitations

While this study presents insight into athletic success and its impact on initial awareness, the decision to attend, and student community engagement, limitations exist in the context of the study. Although the sample’s demographics were consistent with the overall university population, the respondents only represented a small sample of the out-of-state student population at NDSU. Additionally, based on the respondents, no student-athletes were part of this study. Athletic success can play a large role in the recruitment process and the decision to attend a university for student-athletes, and thus, the experiences of this unique population were not accounted for in this particular study, potentially limiting some of the findings. Furthermore, this study was conducted in the case of one specific university with a strong athletic program and the football team that won five straight national championships from 2010-2015 and others in 2017-2019 and 2021, which may result in data unique to the university itself, particularly in a state with no professional sports teams.

While the study focused on athletic success at the institution, other components may have played a role. Athletics was the only factor studied in the survey, but the college choice process is “a complex, multistate process” (Hossler et al., 2003, p. 7), where traditional college choice determinants may have played a role. Due to this, the presence of an athletics bias from students

may exist. Moreover, while the survey contained open-ended formatting, the nature of surveying to collect qualitative data versus an interview limits the richness and depth of information. Similarly, the overall lack of post-survey follow-up may have limited the scope of the findings. Lastly, the focus of the study was unable to separate the level of influence that athletic success had on the students. Rather, it only determined whether it did or did not have an effect; therefore, this becomes a limitation.

Implications and Future Research

As intercollegiate athletics continue to grow and more attention is placed on these programs, it is important to understand the influence of a university's athletics teams and their impact on higher education. This growth of intercollegiate athletics does elicit conversations about the place of university sports in the educational realm. As fewer than a dozen colleges and universities show an annual profit from their athletic programs (Brunet et al., 2013), higher education administrators continue to search for a justification for keeping these programs in the process. As institutions continue to hope for their future Flutie moment, Sperber (2000) suggests that the term has switched from Flutie factor to a more favorable "mission-driven athletics," where big-time college athletics programs are an essential element of the institution's mission, but "has little to do with education and everything to do with keeping enrollment high and tuition money flowing" (Sperber, 2000, p. 62).

As institutions continue to push for increased enrollment and tuition dollars, the current study signifies the importance of understanding athletic success as an influential role in the collegiate decision-making process. The role athletic success plays in enrollment management within the current study lays the groundwork for future collaboration among athletic administrators and admission officers to craft strategic marketing plans that dictate community engagement for the students and their influencers. These influencers include significant persons, e.g., friends, parents, and high school personnel; fixed college characteristics, e.g., cost, location, and programs; and college efforts to communicate with students, e.g., written information, campus visits, and admissions (Chapman, 1981). Furthermore, these results point to Hansen's (2011) research that places athletic success on the same level playing field as traditional college choice factors, including the reputation of programs and the majors offered. As administrators search for a justification for keeping athletic programs, the current study helps identify the influence of athletic success on enrollment management while helping initiate future admissions strategies involving athletic programs.

The current study attempted to research beyond the Flutie factor to qualitatively determine why students attend universities due to athletic success and how these success programs lead to awareness, decisions to attend, and student community engagement. The results are important to higher education administrators as they leverage athletic programs and athletic success as driving factors for enrollment management, student retention, and overall university success.

In addition, the results may benefit college administrators interested in understanding how to improve the desirability of their school in the eyes of high school students and develop recruitment strategies, including the use of athletic promotional content in student recruitment materials, websites, acceptance packets, and beyond. Although literature primarily exists in terms

of athletic success and its effect on the number of applications, administrators can use this study to shift the focus to the importance of collegiate athletic success on retention rates.

Conclusion

Although the Flutie factor has been shown to increase overall applications based on athletic success, the results of this study challenge this idea within specific groups and one type of university with considerations that go beyond the effects of the Flutie factor. Future research in this area should address universities where the other sport programs, including basketball or baseball, maintain a more significant status and unifying factor than the football program. Moving forward, administrative marketing strategies that leverage the athletic success of these teams should be explored through interviews with key administrators. Furthermore, in this case, the study was conducted at an NCAA Division I FCS institution. Future research can attempt to distinguish the differences in the impact of athletic success on awareness, the decision to attend, and campus community and student engagement at NCAA Division II and III and National Association of Intercollegiate Athletics (NAIA) institutions.

References

- Akbas, L. (2023, December 28). *SEC scores big in CFP payouts during the four-team era*. Sportico. <https://www.sportico.com/leagues/college-sports/2023/college-football-playoff-payouts-1234761185/>
- Alter, M., & Reback, R. (2014). True for your school? How changing reputations alter demand for selective U.S. colleges. *Educational Evaluation and Policy Analysis*, 36(3), 346-370. <https://doi.org/10.3102/0162373713517934>
- Associated Press (2020). *NDSU title win draws nearly 2.7M viewers*. ESPN. <https://www.espn.com/college-football/story?id=28483689&src=desktop&rand=ref~%7B%22ref%22%3A%22>
- Beck-Aden, E. (2023, March 20). *NJ schools may benefit from 'Flutie Effect' after NCAA tournament runs*. NBC New York. <https://www.nbcnewyork.com/new-jersey/ncaa-tournament-runs-for-nj-schools-may-lead-to-bumps-in-admissions-and-awareness/4165757/>
- Bowen, H.R. (1980). *The costs of higher education: How much do colleges and universities spend per student and how much should they spend?* Jossey-Bass. <http://doi.org/10.2307/1981498>
- Brunet, M.J., Atkins, M.W., Johnson, G.R., & Stranak, L.N. (2013). Impact of intercollegiate athletics on undergraduate enrollment at a small faith-based institution. *Journal of Applied Sport Management*, 5(1), 78-94. <https://trace.tennessee.edu/jasm/vol5/iss1/12>
- Castle, J., & Kostelnik, R. (2011). The effects of an institution's athletic success on the future freshmen application pool at NCAA division II universities. *Journal of Issues in Intercollegiate Athletics*, 4(1), 411-427. <https://scholarcommons.sc.edu/jiia/vol4/iss1/22>
- Chapman, R.G. (1979). Pricing policy and the college choice process. *Research in Higher Education*, 10(1), 37-57. <http://doi.org/10.1007/bf00977498>
- Chapman, D.W. (1981). A model of student college choice. *The Journal of Higher Education*, 52(5), 490-505. <https://doi.org/10.2307/1981837>
- Chung, D.J. (2013). The dynamic advertising effect of collegiate athletics. *Marketing Science*, 32(5), 679-698. <https://doi.org/10.1287/mksc.2013.0795>
- Cialdini, R.B., Borden, R.J., Thorne, A., Walker, M.R., Freeman, S., & Sloan, L.R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, 34(3), 366-375. <https://doi.org/10.1037/0022-3514.34.3.366>
- City-Data. (2023). *Fargo, North Dakota*. <https://www.city-data.com/city/Fargo-North-Dakota.html>

- Clopton, A.W., & Finch, B.L. (2012). In search of the winning image: Assessing the connection between athletics success on perceptions of external prestige. *Journal of Issues in Intercollegiate Athletics*, 5(1), 79-95. <https://scholarcommons.sc.edu/jiia/vol5/iss1/5>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Sage. <http://doi.org/10.4135/9781452230153>
- Cox, S., & Roden, D.M. (2010). Quality perception and the championship effect: Do collegiate sports influence academic rankings? *Research in Higher Education Journal*, 6, 1-11.
- Dykstra, A. (2013). Does success on the grid-iron and court increase applications to Football Bowl Subdivision (FBS) schools? *Major Themes in Economics*, 15(1), 37-47. <https://scholarworks.uni.edu/mtie/vol15/iss1/5>
- End, C.M., Dietz-Uhler, B., Harrick, E.A., & Jacquemotte, L. (2002). Identifying with winners: A reexamination of sport fans' tendency to BIRG. *Journal of Applied Social Psychology*, 32(5), 1017-1030. <https://doi.org/10.1111/j.1559-1816.2002.tb00253.x>
- Goidel, R.K., & Hamilton, J.M. (2006). Strengthening higher education through gridiron success? Public perceptions of the impact of national football championships on academic quality. *Social Science Quarterly*, 87(4), 851-862. <https://doi.org/10.1111/j.1540-6237.2006.00439.x>
- Hansen, J.M. (2011). *The effects of athletic success on college enrollment applications* [Doctoral dissertation, Texas Tech University]. <http://hdl.handle.net/2346/ETD-TTU-2011-05-1392>
- Hernandez-Julian, R., & Rotthoff, K.W. (2014). The impact of college football on academic achievement. *Economics of Education Review*, 43, 141-147. <https://doi.org/10.1016/j.econedurev.2014.09.002>
- Hoffer, A., Humphreys, B.R., Lacombe, D.J., & Ruseski, J.E. (2015). Trends in NCAA athletic spending: Arms race or rising tide? *Journal of Sports Economics*, 16(6), 576-596. <https://doi.org/10.1177/1527002515592541>
- Hossler, D., Braxton, J., & Coopersmith, G. (2003). Understanding student college choice. In F.K. Stage, D.F. Carter, D. Hossler, & E.P. St. John (Eds.), *Theoretical perspectives on college students* (pp. 5-42). Pearson Custom Publishing.
- Hossler, D., & Gallagher, K. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 62(3), 207-221.
- Jones, W.A. (2010). Football and freshmen retention: Examining the impact of college football on institutional retention rates. *Journal of College Student Retention: Research, Theory & Practice*, 11(4), 551-564. <https://doi.org/10.2190/CS.11.4.f>

- Kinzie, J., Palmer, M., Hayek, J., Hossler, D., Jacob, S.A., & Commings, H. (2004). Fifty years of college choice: Social political and institutional influences on the decision-making process. *Lumina Foundation for Education*, 5(3), 1-76. <https://eric.ed.gov/?id=ED484237>
- Kohn, M.G., Manski, C.F., & Mundel, D. (1974). An empirical investigation of factors which influence college-going behaviors. *Rand Corporation, National Science Foundation*. Report No. R-1470-NSF, 1-45. <https://files.eric.ed.gov/fulltext/ED096896.pdf>
- Lester, S. (1999). *An introduction to phenomenological research*. Stan Lester Developments.
- Lindo, J.M., Swensen, I.D., & Waddell, G.R. (2012). Are big-time sports a threat to student achievement? *American Economic Journal: Applied Economics*, 4(4), 254-274. <https://doi.org/10.1257/app.4.4.254>
- Lopresti, M. (2020, April 7). *UMBC vs. Virginia: How one of the greatest upsets in NCAA tournament history became a blowout*. NCAA. <https://www.ncaa.com/news/basketball-men/article/2020-04-07/umbc-vs-virginia-how-one-greatest-upsets-ncaa-tournament>
- Mangold, W.D., Bean, L., & Adams, D. (2003). The impact of intercollegiate athletics on graduation rates among major NCAA division I universities: Implications for college persistence theory and practice. *Journal of Higher Education*, 74(5), 540-562. <http://doi.org/10.1353/jhe.2003.0037>
- Marshall, C., & Rossman, G.B. (2016). *Designing qualitative research* (6th ed.). Sage.
- McCormick, R.E., & Tinsley, M. (1987). Athletics versus academics? Evidence from SAT scores. *Journal of Political Economy*, 95(5), 1103-1116. <https://doi.org/10.1086/261505>
- Mixon, F.G., Jr., & Trevino, L.J. (2005). From kickoff to commencement: The positive role of intercollegiate athletics in higher education. *Economics of Education Review*, 24(1), 97-102. <https://doi.org/10.1016/j.econedurev.2003.09.005>
- Mulholland, S.E., Tomic, A., & Sholander, S.N. (2014). The faculty Flutie factor: Does football performance affect a university's US News and World Report peer assessment score? *Economics of Education Review*, 43, 79-90. <https://doi.org/10.1016/j.econedurev.2014.09.006>
- North Dakota State University. (2024). *Historical fall term enrollments*. Office of Institutional Research and Analysis. https://www.ndsu.edu/oira/ndsu_fast_facts/annual/
- North Dakota State University. (2023a). *Undergraduate applicants, admissions, and enrollment*. Office of Institutional Research and Analysis. <https://www.ndsu.edu/oira/dashboards/admission/>

- North Dakota State University. (2023b). *Annual fall term enrollments*. Office of Institutional Research and Analysis.
https://www.ndsu.edu/oira/ndsu_fast_facts/enrollment_reports/annual/
- O’Neil, D. (2010, August 4). *Northern Iowa: The shot and the effect*. ESPN.
https://www.espn.com/mens-college-basketball/columns/story?columnist=oneil_dana&id=5436566
- Pascarella, E.T., & Terenzini, P.T. (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto’s model. *Journal of Educational Psychology*, 75(2), 215-226.
<https://doi.org/10.1037/0022-0663.75.2.215>
- Perez, S.J. (2012). Does intercollegiate athletics draw local students to a university? *Journal of Sports Economics*, 13(2), 198-206. <https://doi.org/10.1177/1527002511404509>
- Peterson-Horner, E., & Eckstein, R. (2014). Challenging the “Flutie factor”: Intercollegiate sports, undergraduate enrollments, and the neoliberal university. *Humanity & Society*, 39(1), 1-22. <https://doi.org/10.1177/0160597614552900>
- Pond, A. & Greenwell, T. C. (2023). Re-visiting the Flutie Effect: An exploration of athletic success’ impact on student enrollment decisions. *Journal of Issues in Intercollegiate Athletics*, 16(1), 486-505. <http://doi.org/10.18297/etd/3620>
- Pope, D.G., & Pope, J.C. (2014). Understanding college application decisions: Why college sports success matters. *Journal of Sports Economics*, 15(2), 107-131.
<https://doi.org/10.1177/1527002512445569>
- Pumerantz, Z. (2012, December 6). *The most iconic calls in sports*. Bleacher Report.
<https://bleacherreport.com/articles/1433660-the-most-iconic-calls-in-sports?ref=live365.com>
- Sperber, M.A. (2000). *Beer and circus: How big-time college sports is crippling undergraduate education*. Holt Paperbacks.
- Tajfel, H., & Turner, J. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Nelson-Hall.
<http://doi.org/10.4324/9780203505984-16>
- Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68(6), 599-623.
<https://doi.org/10.2307/2959965>
- U.S. Census Bureau. (2020). 2020 census results. *U.S. Census Bureau*.
<https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020-census-results.html>

Weistrop, D. (2010). *The effects of winning a basketball national championship on admission factors*. [Capstone Project, Syracuse University].
https://surface.syr.edu/honors_capstone/397

APPENDIX**North Dakota State University Student Survey**

Q1 What is your year of birth?

Q2 Are you an in-state, out-of-state, or international student?

In-State (1)

Out-of-State (2)

International (3)

Q3 Hometown City, State, Country

Q4 Choose one or more races that you consider yourself to be:

White (1)

Black or African American (2)

American Indian or Alaska Native (3)

Asian (4)

Native Hawaiian or Pacific Islander (5)

Other (6) _____

Q5 Are you a NDSU student-athlete?

Yes (1)

No (2)

Q6 Was success of the athletic program a determining factor in attending North Dakota State University?

Yes (1)

No (2)

Q7 What sport team influenced you the most to attend NDSU?

Baseball (1)

Men's Basketball (2)

Women's Basketball (3)

Men's Cross Country (4)

Women's Cross Country (5)

Football (6)

Men's Golf (7)

Women's Golf (8)

Women's Soccer (9)

Softball (10)

Men's Track and Field (11)

Women's Track and Field (12)

Women's Volleyball (13)

Wrestling (14)

Q8 What role did NDSU athletics play in your initial awareness of the school?

Q9 What impact did the success of NDSU athletics have on your decision to attend?

Q10 What role does NDSU athletics play on campus in terms of community and student engagement?