# ABSTRACT OF CAPSTONE

Nathan M. Cochran

The Graduate School

Morehead State University

March 20, 2023

# A QUANTITATIVE INVESTIGATION OF ATHLETICS ROSTER MANAGEMENT IMPACT ON ENROLLMENT AND RETENTION AT NAIA HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

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Abstract of Capstone

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A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
Ernst and Sara Lane Volgenau College of Education
At Morehead State University

By

Nathan M. Cochran

New Orleans, Louisiana

Committee Chair: Fujuan Tan, Ph.D., Associate Professor

Morehead, Kentucky

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## A QUANTITATIVE INVESTIGATION OF ATHLETICS ROSTER MANAGEMENT IMPACT ON ENROLLMENT AND RETENTION AT NAIA HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Previous research has investigated the use of athletics roster management at small private White institutions (PWIs), but no research has evaluated the impact on historically Black colleges and universities (HBCUs). This quantitative ex post facto research explored athletics roster management's impact on enrollment and retention using existing data from the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) and the National Association of Intercollegiate Athletics (NAIA) Return on Athletics (ROA) database. This study adds to the body of knowledge on athletics roster management contributing to enrollment and retention at NAIA HBCUs. NAIA HBCUs are considered small colleges and frequently operate as enrollment-dependent institutions. Previous research has focused on PWIs in the Midwest. The sample consisted of 21 NAIA HBCUs that consented to participate in the research. The findings showed a significant difference in NAIA HBCUs that use athletic roster management having higher enrollment than those that do not. Additionally, the findings conclude that there is no significant difference between the retention of NAIA HBCUs' use of athletics roster management and institution that do not. The correlation analysis indicates almost zero relationship between using athletics roster management and higher enrollment at NAIA HBCUs. Furthermore, the correlation

analysis also indicates that athletics roster management is inversely related to retention at institutions using the practice.

KEYWORDS: Quantitative, Athletics, HBCUs, Enrollment, Retention

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By

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# DEDICATION

I thank God for helping me through this process. I have only completed this in His strength. I thank my loving wife, Candice, for all your support, patience, and your listening ear when I griped my way through. You have a talent for seeing the world differently, which is so helpful. I love you so much. Thank you to Phillip and Sharon Cochran (my parents), who encouraged me in education. Thank you to my brother Greg who continually motivates me. Finally, thank you to my children for being so supportive and loving with me through this process. Specifically, I would like to thank Nigel and Nehemiah (Nemo). As my oldest sons, you encouraged me to complete this program and follow my dream. Thank you, I appreciate you, and I love you. I dedicate this to you.

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Thank you to Dr. Elliott Hammer for your assistance with this research. I want to acknowledge Alan Grosbach from the National Association of Intercollegiate Athletics. Alan, thank you for all the help you provided with the data. I could not have completed this capstone without your help.

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# Chapter 1

## Introduction

Growing enrollment in small colleges and universities is vital to the survival of these institutions (Black, 2001; Bracey, 2017). The outcomes of enrollment generate revenue for higher educational institutions. When enrollment and retention fail to develop sufficient revenue, college and university operations and academic programs are threatened (Carey, 2014; Docking & Curton, 2015). Many small colleges have utilized their co-curricular and athletics programs to assist in enrollment management. Understanding the enrollment challenges facing small historically Black colleges and universities (HBCUs), this study examined the impact of athletics on enrollment. In addition, the research investigated the relationship between retention as a component of athletics roster management and overall enrollment growth. Athletics roster management is a concept of utilizing rosters of collegiate athletic teams and factoring their recruitment and size into the strategic enrollment management plan for the college (Docking & Curton, 2015). The purpose of this study was to explore the impact of athletics roster management on enrollment and retention at small National Association of Intercollegiate Athletics (NAIA) HBCUs.

The intended audience for this research are senior administrators, such as the President/CEO, Vice President of Finance/CFO, and Vice President for Enrollment Management at small NAIA HBCUs. This audience was selected due to their influence on strategic enrollment plans at their respective colleges and universities.

The research in this study can assist these administrators in making strategic enrollment projections utilizing athletics to help them reach their enrollment goals. Having worked at several small HBCUs, the researcher has noticed little collaboration between the senior administration, the admissions office, and the athletics department regarding the campus's strategic enrollment management plans.

**Context and Background**

The focus of this study was small NAIA HBCUs because there has been no research in this area. Most existing research focuses on small, private, predominantly White institutions (PWIs) in the Midwest, and these institutions are in the National Collegiate Athletic Association (NCAA) Division III. NCAA Division III offers no scholarships and there are currently no HBCUs at the NCAA Division III level (U.S. Department of Education, 2021). The researcher defines “small” institutions as institutions with undergraduate enrollments of under 2,500 students. The institutions in this study operate in the NAIA.

**Importance of Enrollment and Retention**

Enrollment and retention at HBCUs are essential for the budgets of these small NAIA institutions. Unfortunately, many HBCUs do not leverage their athletics programs for enrollment growth. According to research, athletics and co-curricular programs can attract students to small colleges (Docking & Curton, 2015; Dougherty & Dougherty, 2018; Snyder & Waterstone, 2015). In addition, the retention of students is as vital to enrollment growth as recruiting students to new programs at the college or university level (Barnett, 2011a, 2011b; Swail, 2003). If utilized correctly,

athletics and co-curricular programs can be vital tools in helping colleges reach their enrollment goals. These goals must work to find optimal athletics roster sizes, so athletics contribute to enrollment but do not have a negative effect on retention. From the researcher's experience, there are not enough HBCUs that capitalize on athletics roster management as a contributor to their strategic enrollment and retention plans.

The relationship between athletics, enrollment, and retention is of particular interest to campus administration due to the direct impact enrollment plays in the budget of these small NAIA HBCUs ("NAIA vs. NCAA", 2021; Gulf Coast Athletic Conference President's Meeting, personal communication, September 9, 2021). However, leveraging athletics in enrollment management and retention strategy is hardly new (Thelin, 1994). Unfortunately, there is no research on the impact of intercollegiate athletics on small HBCUs enrollment, specifically those in the NAIA (Sparvero & Warner, 2013).

Small colleges are tuition-driven institutions, and small NAIA HBCUs are no different. These institutions set enrollment and retention goals to develop the college or university budget every year (Hossler, 2011). Even though NAIA athletics programs provide athletically related grants-in-aid, these institutions have scholarship maximums for each sport. The scholarship maximums are far less than the average roster size. For example, the NAIA allows a football team to have only 24 full scholarships or grants-in-aid, and the NCAA Division II maximum for football is 36 full scholarships. According to Fujita (2021), the average collegiate football roster is 100 players. If only 24 to 36 players are on scholarship, then 64 to 76 football players

on the roster are paying full tuition and fees. Leveraging athletics for these small colleges can be the difference between making the budget and having a budget shortfall.

However, colleges must ensure that athletics rosters are manageable when using athletic roster management. Athletic rosters that are too large can negatively impact the student–athlete experience, leading to retention issues (Murphy, 2021). Large athletic rosters can be discouraging for student-athletes who might not have a chance to compete or if there is insufficient equipment for all the student-athletes. These factors can cause student-athletes to transfer to other colleges and universities, seeking a better athletic experience (Murphy, 2021). The loss of these student-athletes ultimately affects retention for institutions. Through the NAIA Return on Athletics (ROA), the NAIA provides institutions with optimal roster size data to mitigate retention issues ("Return on Athletics", 2021).

**Research Questions**

The research questions aimed to assess the impact athletics roster management has on university enrollment growth and retention at NAIA HBCUs.

RQ1. How does using athletics roster management impact enrollment at small NAIA HBCUs?

RQ2. How does using athletics roster management impact retention at small NAIA HBCUs?

## Hypotheses

A quantitative analysis of the data was used to address the following hypotheses related to enrollment and retention at HBCUs.

**$H_0$1:** Institutions that use athletics roster management for athletics will not have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_a$1:** Institutions that use athletics roster management have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_0$2:** Institutions that use athletics roster management do not have significantly higher retention rates than institutions that do not use athletics roster management.

**$H_a$2:** Institutions that use athletics roster management have significantly higher retention rates than institutions that do not use athletics roster management.

## Significance of Study

This research is significant because no studies have explored athletic roster management use in athletics at small NAIA HBCUs. This study informs the leadership of small HBCUs and provides them with a framework and research data to consider the use of athletic roster management in their enrollment and retention strategies. The research expands on current studies by examining the relationship between athletics roster management, retention, and enrollment at HBCUs. Athletics

roster management is frequently used by small, private institutions of NCAA Division III. Since there are no NCAA Division III HBCUs, and all previous studies have focused on the private PWI institutions in this division. Therefore, this study explored HBCUs using athletics roster management as a contributor to the strategic enrollment management and retention plan at small NAIA HBCUs.

**Research Framework**

To date, there is no comprehensive framework for using athletics as a dominant facilitator of institutional strategic enrollment success. Enrollment management developed as a focus of higher education in the late 1970s, when the number of college students was projected to decrease into the early 1990s (Hossler, 2011). In addition, Chaffee (1984) linked strategic institutional models of management with actions geared toward institutional recovery after adversity. The actions suggested in Chaffee's framework have been used in other enrollment management strategies and is appropriate for this research.

Chaffee's (1984) comprehensive study of small, private, liberal arts colleges in the late 1970s found that institutions that were recovering used strategies with an adaptive model of management. Chaffee identified two approaches: the adaptive approach and the interpretive approach. The adaptive process is used by organizations concerned with survival. The actions taken by this model are directed toward orienting the university to meet changes in the market and demand. Specific actions for the adaptive process include market research, environmental trend monitoring, staffing flexibility, and expanded program offerings (Chaffee, 1984; Fugazzotto,

2009; Kezar, 2016). The enrollment management literature often places specific strategies in Chaffee's adaptive framework.

Vander Schee (2007) references Chaffee's (1984) adaptive framework while providing a history and definition of enrollment management. According to Vander Schee (2007), strategic enrollment management is defined as a process to aid institutions in achieving students' optimal recruitment, retention, and graduation rates. Strategic enrollment management is a series of activities that involve the entire campus. These activities ensure that all departments on campus develop common goals that enrich recruitment, enhance academics, and improve student services that will assist in retaining and matriculating recruited students toward graduation (Black, 2001; Bontrager et al., 2012).

The focus of this research was that strategic enrollment management and retention concepts are implemented using the whole campus community, including the athletics department, therefore, using athletics roster management as a facilitator of enrollment growth and retention. As a result, practitioners can better understand organizational responses that may help HBCUs succeed in periods of enrollment decline and financial hardship using this model.

**Summary**

Small NAIA HBCUs struggle to grow enrollment and retain students. Without sound strategies, these historic institutions will die off. It is time for different methods to be explored for HBCU survival. Athletics roster management is a method that all small HBCUs should examine to increase enrollment and retention. This study

explored athletics roster management's impact on enrollment and retention at small NAIA HBCUs.

The following chapters will examine the research which supports the study. In chapter two, the researcher examined the background in enrollment and the support for using athletics roster management in the strategic enrollment plan. The third chapter contains the research methodology. The researcher explains the project's data collection and analysis process in the third chapter. Furthermore, the researcher provides the findings of the study in chapter four. Finally, chapter five summarizes the findings, discussion, limitations of the study, and research recommendations.

**Definitions of Key Terms**

*Athletics roster management* – Athletics roster management is a concept of utilizing rosters in collegiate athletic teams and factoring them into the strategic enrollment management plan for the college. Athletic coaches are required to recruit and maintain roster numbers. For example, a basketball team may be required to carry a roster of 24 players to help the college reach its enrollment goal for the year (Docking & Curton, 2015).

*Enrollment Management* – The institutional roadmap for achieving enrollment goals is typically tied to enrollment size and impacts institutional revenue and the learning environment (Hossler, 2011; Ward, 2005).

*Historically Black College and University (HBCU)* – "any historically black college or university that was established before 1964, whose principal mission was, and is, the education of Black Americans, and that is accredited by a nationally

recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation." (*White House Initiative on Advancing Educational Equity, Excellence, and Economic Opportunity through Historically Black Colleges and Universities*, 2021)

*National Association of Intercollegiate Athletics (NAIA)* – The NAIA is a regulatory body that protects student–athletes from abuse, implements rules and regulations for the different fields of play, and regulates academic standards for intercollegiate athletics. The NAIA chooses to focus on smaller colleges and universities ("About Us", 2021).

*National Collegiate Athletic Association (NCAA)* – The NCAA is a regulatory body that protects student–athletes from abuse, implements rules and regulations for the different fields of play, and regulates academic standards for intercollegiate athletics. The NCAA is broken into three divisions: I, II, and III. Division I often has the most significant budgets, visibility, and the ability to offer scholarships for athletic ability. Division II has a small budget and gives scholarships for athletic ability. Division III offers no athletic scholarships ("What is the NCAA?", 2021).

*NCAA Division II* – Division II is one of three NCAA Memberships that offers scholarships, emphasizes the student–athlete's growth, and is not focused on spectators or revenue ("Our Three Divisions", 2021).

*NCAA Division III* – NCAA Division III schools are much less publicized and are mission-focused, educating people through academic and athletic approaches to higher education. These colleges also offer no athletic aid for participation in intercollegiate athletics ("Divisional differences and the history of multidivision classification", 2021).

*Predominantly White Institutions (PWI)* – Colleges or universities where most of the student body is White (Bourke, 2016).

*Retention* – Retention is a term that describes the matriculation and attrition of students from admission to graduation. According to Seidman (2004), retention rates measure what colleges and universities are doing to help students attain their academic and social goals.

*Return on Athletics (ROA)* – The NAIA defines the Return on Athletics with the following statement:

> Return on Athletics (ROA) is the only resource available to maximize the business performance of NAIA athletic departments. Through the collection and analysis of member data, ROA leverages simple and consistent calculations across 250 small colleges and universities to provide the most complete athletics department financial data available ("Return on Athletics", 2021, para. 1).

*Scholarships* – Scholarships refer to grant-in-aid or financial aid explicitly provided to cover all or a portion of tuition, fees, room, and board for a student–athlete (Fujita, 2021).

*Small Private Liberal Arts Colleges* – The Carnegie Classification of Institutions breaks colleges and universities down into categories (Bok, 2013). For example, there is a category for liberal arts colleges called "Baccalaureate Colleges – Liberal Arts" within the classification system. These institutions are primarily undergraduate colleges, with a significant emphasis on baccalaureate degrees. These private colleges are also not-for-profit colleges and universities (Bok, 2013).

# Chapter 2

## Literature Review

The purpose of this chapter is to explore the literature relevant to this study. The researcher has divided the information into several sections beginning with the history of HBCUs and the relevant athletics governing bodies. Additionally, the research provides insight into strategic enrollment management, such as enrollment challenges for HBCUs, enrollment factors for undergraduates, enrollment factors for Black undergraduate students, and undergraduate retention factors. Finally, this chapter will connect athletic roster management and Chaffee's (1984) adaptive model conceptual framework. This final section will provide relevant research on integrating athletics into the enrollment management strategy and how adding athletics impacts the university's image, recruitment, and culture.

### History of HBCUs

Before abolishing slavery in the United States, free Blacks were educated in the North at three colleges known today: Cheyney University, Lincoln University of PA, and Wilberforce University (“Historical Origins of HBCUs”, 2010). After slavery was abolished in the United States following the Civil War, many HBCUs were established by the Freedman’s Bureau and religious missionary groups. These institutions generally provided primary and secondary education in the early years of their existence. Built for educating Black men during the post-Civil War era, many scholars have questioned whether HBCUs have outlived their usefulness (Bracey, 2017; Brown, 2013). Whether they continue to be useful or not, HBCUs receive a

status designation from the U.S. Department of Education based on two things: the institution being established before 1964, and the institution's principal mission being to educate Blacks (White House Initiative on Advancing Educational Equity, Excellence, and Economic Opportunity through Historically Black Colleges and Universities, n.d.).

Cooper and Hawkins (2016) conclude that HBCUs continue to make valuable contributions and produce higher Black-male graduation rates than PWIs. According to one author, "70% of all Black doctors and dentists, 50% of all Black engineers and public-school teachers, and 35% of all Black attorneys received their bachelor's degrees at an HBCU" (Avery, 2009, p. 328). HBCUs have maintained their mission of providing educational opportunities for Blacks since before the Civil War (Davis, 2015). However, after Brown v. Board of Education in 1954, many Black colleges began to suffer from brain drain as PWIs in the North and the South started to attract high-achieving Black students ("Historical Origins of HBCUs", 2010).

## Athletics Governing Bodies

### *National Collegiate Athletic Association (NCAA)*

Given the nature of intercollegiate athletics, we must examine the athletics governing bodies that regulate these colleges and universities. During the 18th and 19th centuries, students at American colleges started participating in sports for recreation and physical activity (Schuh & Jones, 2010). Today, collegiate athletics takes on a whole different meaning, with national championships and school pride on the line. Violence in football, inequalities in athlete treatment, and collegiate sports

popularity have led to the need for reform (Thelin, 2019). In 1906, President Theodore Roosevelt hosted a meeting between college athletics leaders and presidents. According to Snyder and Waterstone (2015), this meeting was the founding of the NCAA. The NCAA sought to establish competition and eligibility rules for football and other intercollegiate sports. The NCAA adopted its current name in 1910. The NCAA was founded to protect student–athletes from abuses at the time; over 110 years later, the NCAA continues to implement rules and regulations on the fields of play, but they also enforce guidelines that regulate academic standards as well ("What is the NCAA?", 2021).

Intercollegiate programs expanded during the golden age of higher education, forcing the NCAA to create a structure that recognized varying levels of funding, commitment, and emphasis. In 1973, the NCAA split the organization into three competitive and legislative groupings: Divisions I, II, and III ("Our Three Divisions", 2021). The divisions can create rules regarding governing, recruiting, play and practice seasons, championships, and athletic eligibility. NCAA Division I institutions have historically been the most visible and commercially affiliated collegiate divisions. NCAA Division II emphasizes the student–athlete's growth and is not focused on spectators or revenue. NCAA Division I and II colleges provide scholarships for intercollegiate athletics. NCAA Division III schools are much less publicized and are mission-focused, educating people through academic and athletics approaches to higher education. These colleges also offer no athletic aid for

participation in intercollegiate athletics ("Divisional differences and the history of multidivision classification", 2021).

***National Association of Intercollegiate Athletics (NAIA)***

The second primary athletic governing body is the NAIA, a governing body that began as the National Association of Intercollegiate Basketball (NAIB) in 1937. The NAIA has over 360 higher education institutions and conducts two dozen national championship events ("About Us", 2021). In 1948, the NAIA was the first athletics organization to allow Black athletes, and in 1953, HBCUs were voted into membership. In 1952, the name of the organization was changed to NAIA. The NAIA became an all-encompassing body for intercollegiate athletics. Like the NCAA, the NAIA sets rules and standards for sports and eligibility. The NAIA has divisions in men's and women's basketball, limiting the number of scholarships allowed ("Return on Athletics", 2021). The NAIA and NCAA Division II are very similar to each other in scholarships, institutional size, and institutional profile ("A Closer Look – NAIA and NCAA D2", 2021).

The NAIA has chosen to focus on small college returns on investment. The NAIA provides small colleges with the information to make athletics work for the institution, understanding that many use athletics to increase enrollment ("The NAIA Advantage", 2021). NCAA Division III schools began using a similar model in the mid-1990s and continued to add co-curricular programs and athletics to increase enrollment (Docking & Curton, 2015). Using co-curricular programs in NCAA Division III, which offers no athletics scholarships, and the NAIA, which offers

limited athletic aid, assists the college in making money from the significant roster size of football and other sports teams.

## Strategic Enrollment Management

### *Enrollment Management*

Vander Schee (2007) noted five components of strategic enrollment management - We will focus on three: (1) institutional marketing and utilizing research to identify unique institutional characteristics that students choose to enroll, and (2) admissions and recruitment focused on new markets, and (3) retention programs. These three components align with Chaffee's (1984) adaptive model, in which the institution ensures its survival in pursuit of resources. An adaptive model is a strategy that anticipates the future, monitors environmental factors, identifies opportunities and threats, and ensures that the organization can capitalize on those opportunities. Thus, Chaffee's "strategy" describes how we obtain strategic enrollment management (Chaffee, 1984; Kezar, 2016), a crucial concept for many small colleges and universities.

Many colleges are tuition-dependent, and many cannot make their operating budgets without students (Stokowski et al., 2020). Therefore, understanding why students attend one college over another is a vital concept in strategic enrollment management. Private institutions looking to gain a better understanding can reference the study completed by Hu and Hossler. Hu and Hossler's (2000) research compared the data from their survey to data collected by the Lilly Foundation on student college choice to examine some correlation between demographics and college choice. The

research showed that student high school GPA, the mother's education level, and a subjective response to tuition costs all appeared to be significant variables in differentiating student preference for selecting private institutions (Hossler et al., 2019; Hu & Hossler, 2000; Letawsky et al., 2003).

### *Student Choice*

In examining college selection from an HBCU perspective, Mamba et al. (2015) found that their study resulted in several themes about student college choice. According to the authors, the participants were encouraged to attend college, and their motivation came from different sources. The research also showed that some students were quite knowledgeable about HBCUs, while others had limited knowledge of HBCUs before choosing to attend. The final choice factor was the financial incentives and location that played a role in attending the institution (Mamba et al., 2015).

According to research by Pauline (2010), the data show that several factors in rank order were influential in student–athletes selecting a college: career opportunities after graduation, academic reputation, academic major, the team, and the head coach's personality style. The author's study also found that female student–athletes considered financial aid more important than male student–athletes (Pauline, 2010). Pauline (2010) noted that the most surprising finding is that the student–athletes in this study ranked the athletic category last in importance regarding college selection.

Caruth (2016) provides an assessment of what she calls "Today's College Students (TCS)." In her study, she described TCS as very familiar with technology

and academically underperforming compared to the rest of the world. In her research, Caruth (2016) explained that students have changed due to having access to technology for most of their lives. These students expect instructors and administrators to communicate in the same way they do. These college students also have difficulty with long lectures and boring PowerPoint presentations.

Caruth's (2016) data show that it is beneficial for instructors and college administrators to know and understand their students. Her analysis also states that Millennials like to seek information that is easily accessible and in familiar formats. Millennial parents are also very involved in the recruiting process and desired to be included as prospective students. According to Lindbeck and Fodley's (2009) research, which supports Caruth, Millennial students seek to connect with university representatives, and technology can give them focused on-demand attention.

### *Enrollment Challenges for HBCUs*

In the last 15 years, more than 30 non-HBCUs have closed their doors, terminated faculty, and informed students that they need to find other schools (Docking & Curton, 2015). In the last 10 years, several HBCUs have struggled to remain accredited through regional accrediting bodies. Most of these struggling colleges have been small liberal arts colleges. The economic collapse of 2008 caused ripples in enrollment and budgets for many colleges in all regions. HBCU leadership must systematically approach the institution's issues to reverse debt and set the college on a healthy fiscal path. Implementing effective marketing strategies and securing healthy enrollment are vital (Davis, 2015; Tolston, 2016).

According to the U.S. Department of Education, there are 84 four-year HBCUs in the United States (U.S. Department of Education, 2021). Forty-four of these HBCUs are private institutions, and 40 are public institutions. In 2019, the U.S. Department of Education data showed that 20 of 44 private colleges (45%) had an undergraduate enrollment of fewer than 1,000 students (U.S. Department of Education, 2021). HBCUs face the following enrollment challenges: (1) the dependence on African-American students to grow enrollment (Sissoko & Shiau, 2005), (2) the increased cost of higher education and reduced federal aid (Mamba et al., 2015), and (3) competition from PWIs. According to Sissoko and Shiau (2005), "The survival and growth of many HBCU's depend on their ability to maintain or improve their relative share of Black students" (p. 182). Although HBCUs do not exclude anyone from attending their institutions, studies show that other races are leery of attending HBCUs and do not see the same value (Mamba et al., 2015).

In a study done by Talbert (2012), Black students made up more than half of the total enrollment of two-year colleges. The author's research shows that Black students are more conscious of price, concentrating on lower-priced two-year colleges. The price of education creates a significant source of competition for four-year HBCUs. PWIs have also contributed to the limited number of Black students attending HBCUs (Mamba et al., 2015). Before 1976, two-thirds of all Blacks attending four-year colleges and universities attended HBCUs (Brown, 2013). Desegregation led to a more significant number of students attending PWIs and far fewer attending HBCUs.

### *Factors Influencing Undergraduate Enrollment*

Several authors have examined the manageable and unmanageable factors and categories that affect the supply and demand for college and university enrollment. Economic, social, and cultural factors have an impact on enrollment (Brinkman & McIntyre, 1997; Kalsbeek & Hossler, 2009). Lederman (2013) also elaborated on the relevant actions of competitor institutions on enrollment projections. Public policy also plays a part in altering public perceptions of institutions. An enrollment forecast is a numerical estimate of a future enrollment level. Colleges and universities must make accurate predictions to create a sound institutional budget based on incoming enrollment and tuition revenue (Brinkman & McIntyre, 1997; Harrington & Schibik, 2013; Kalsbeek & Hossler, 2009).

Furthermore, Ober et al. (2020) examined the obstacles deterring students from enrolling in college. Their study highlighted the difficulties many students face before enrolling in college, such as selecting, applying, and being admitted to college. Ober et al. (2020) use the term "summer melt" to describe how academically prepared and motivated students who have graduated from high school and are admitted to college decide not to attend college in the fall preceding their senior year.

Ober et al. (2020) pointed out in the literature that there are many reasons for summer melt. The authors indicated that the financial burden of college, even when attaining a scholarship, makes the process difficult to manage. For example, 16% of conversations with advisers dealt with financial aid issues, questions, and concerns (Ober et al., 2020). This study also showed that low-income first-generation students

lacked access to mentoring and support. The lack of these mentors led to the decision of many qualified students not to attend college in the fall (Ober et al., 2020).

One analysis of college tuition examines students' thoughts and feelings about student loans (Xue & Chao, 2015). Although loans provide many students with the opportunity to attend college, many students report hardships once they have graduated, especially students from low-income backgrounds. According to Xue and Chao's (2015) study, many students factor in cost when selecting a school. Parental advice and fear of economic burden after graduation also play a significant role in student college selection. The study found that low-income students are opposed to paying for college through loans (Xue & Chao, 2015).

In addition to college tuition, Konnert and Giese (1987) considered why male student–athletes choose to attend private NCAA Division III schools and whether these factors differ from male non-athletes. The authors acknowledge that male student–athletes make up greater than 50% of the male population at many small institutions (Konnert & Giese, 1987; Snyder & Waterstone, 2015). However, according to Ho-Sang (2018), athletics makes up 8-20% of the student body at HBCUs, and male students account for a majority of the student-athletes at 82% of all HBCUs. Therefore, some HBCUs use the expansion of male sports to increase male enrollment (Ho-Sang, 2018). In addition, college and university presidents at these small colleges acknowledge that student–athletes are a distinct subgroup of students, creating additional enrollment (Griffith & Johnson, 2002; Ho-Sang, 2018; Konnert & Giese, 1987; Snyder & Waterstone, 2015).

Konnert and Giese (1987) showed that all three groups of males in football and basketball, males in other sports, and male non-athletes identified three reasons for choosing their current institution. The three reasons were specific academic programs, financial aid opportunities, and a general academic reputation. Multiple studies show that the opportunity to continue sports in college is less critical for other varsity athletes than for football and basketball players (Griffith & Johnson, 2002; Konnert & Giese, 1987; Smith, 2019).

Pope and Pope (2009) expand on this idea by examining the relationship between an academic institution's sports success and the quantity and quality of students who apply to the school. According to the authors, many administrators have argued that college athletics is like the "arms race" because of increasing costs and facilities. However, others believe that athletics provides indirect benefits, such as student body diversity, increased alumni donations, and increased admissions applications (Pope & Pope, 2009).

Pope and Pope (2009) study is a more comprehensive examination of the impact of sports success on incoming students' quality and quantity. Pope and Pope's (2009) data analysis results showed that being in the NCAA tournament increased enrollment by 1% to 5% in some categories. Their results for football were similar, creating a 2.5% to 8% increase. In addition, football schools ranked in the top 20 of the AP poll, and basketball teams that made the NCAA tournament saw a 12% increase in SAT scores in the 900–1100 range and an 8% increase in the scores more significant than 1100 (Pope & Pope, 2009).

### *Enrollment Factors for Black Undergraduates*

Gyapoug and Smith (2012) studied factors influencing Generation-Y African Americans and their college education choices. In their study, they attempted to understand the information vital to the recruitment of these students. The authors describe Generation Y as the Dot Com Generation (Gyapoug & Smith, 2012). The Y-Generation are the first students to grow up with computers in their homes and have schools with internet access. This generation has different cultural experiences and meanings. According to Gyapoug and Smith (2012), the Y-Generation is supposed to be the most educated generation and earns higher incomes at the time of this article. The study shows that students in this generation overwhelmingly utilized the internet to make their college selections. Most students were also heavily influenced by their families regarding their college selections (Gyapoug & Smith, 2012).

Cooper and Hall (2016) attempted to understand Black student–athletes' challenges and identify strategies to improve academic achievement and college experiences in a separate study. According to the authors, the NCAA has conducted considerable research on college athletes. Still, there is little focus on the Black student–athlete in an HBCU setting, so Cooper and Hall's (2016) study seeks to understand Black male student–athletes' experiences attending an HBCU in the southeastern United States. In previous studies, Black male student–athletes often faced challenges due to a lack of academic preparation before college and differential treatment on campus based on their various identities. Cooper and Hall (2016) identified the critical influences of academic achievement and positive experiences at

HBCUs. From their triangulation of data, the authors note strong relationships with individuals affiliated with HBCUs, a nurturing familial environment, and an institutional focus on student–athletes' holistic development (Cooper & Hall, 2016).

In addition to academic preparation, finance is often a hindrance for HBCU students and student–athletes alike. According to Johnson et al. (2019), HBCUs serve minority and low-income families. These students are more likely to receive financial aid than students at PWI institutions. In the fall of 2011, the US Department of Education made significant changes to the Parent Loan for Undergraduate Students (PLUS) credit standards. These changes significantly impacted the retention and completion of Black students who rely on financial aid at a much higher rate (Johnson et al., 2019). According to Johnson et al. (2019), the data showed that access to PLUS loans declined sharply from 2012-2013, and the decreases were not replaced with any other federal aid. This decrease in funding caused a sharp decline in HBCU enrollments and retention rates as students no longer had the funding to persist at these institutions.

### *Retention Factors for Undergraduates*

When evaluating enrollment growth, retention is just as necessary as recruiting. Often, institutions believe that successful athletics will harm institutional retention. Jones (2010) cited studies that examined the relationship between six-year graduation rates and college football success. Jones states that the data show a positive and significant correlation between football success and graduation by encouraging the college's mission and student participation in campus life. Mixon

and Trevino (2005) examined the impact of intercollegiate athletics, football success, and the retention of first-year students. In their study, the results showed that football success had a positive impact on freshman retention and six-year graduation rates. The researchers hypothesized that successful college football programs created a "football chicken soup" effect on campus. Students on campus utilized college football games to release mental and psychological pressures (Mixon & Trevino, 2005; Pope & Pope, 2009). These studies show that athletics do not damage retention but can increase the retention of the entire campus.

Talbert (2012) acknowledged academic leaders' responsibility for developing strategic methods to increase enrollment, retention, and graduation (ERG) rates. Talbert's study focuses on public technical and community colleges because, historically, more than 50% of students of color have enrolled in community colleges. However, the findings also apply to small colleges and HBCUs. Multiple studies note three essential strategies for increasing ERG rates (Miller & Bell, 2016; Talbert, 2012). The first is having an ERG plan of action. Investing in community–academic partnerships is the second essential strategy. Finally, having strong academic advice and mentorship programs available for students is vital (Miller & Bell, 2016; Talbert, 2012).

Williams and Pennington (2006) researched the connections between athletics, recruitment, retention, student activities, alumni, and community relations. According to the authors, the study shows that athletics promotes pride on campus and among students (Barnett, 2011a; Williams & Pennington, 2006). In addition,

Cooper and Hall (2016) highlight the relationships that HBCUs develop with student–athletes. The authors found that the nurturing environment and focus on the whole student–athlete directly correlates to higher retention of student–athletes in this setting. In short, HBCU culture and participation in athletics help with retention (Cooper & Hall, 2016).

**Athletics Integrated in Enrollment Management**

Small private institutional enrollment is of interest because these institutions are highly susceptible to enrollment decline, which can cause their demise. HBCUs are even more vulnerable to declining enrollment after years of underfunding (Brooks, 2021; Redd, 1998). In addition, HBCU endowments are lower than many PWIs, while some HBCU deficits are higher (Albritton, 2012; Redd, 1998).

The relationship between NAIA intercollegiate athletics and enrollment is of particular interest to campus administration due to the direct impact enrollment has on the budgets of these small HBCUs. According to Brunet et al. (2013), increased enrollment increases revenue. In addition, it can positively impact the application pool's selectivity because of the more significant number of applications generated. However, while leveraging athletics in an enrollment management strategy is hardly new, there is no research on the impact of intercollegiate athletics as small nonprofit schools or HBCUs, specifically those affiliated with the NAIA (Brunet et al., 2013; Sparvero & Warner, 2013; Thelin, 1994). According to Jeffrey Docking, President of Adrian College, these small colleges need to identify activities that will generate enrollment on each campus and leverage these activities to increase enrollment

(Docking & Curton, 2015). Docking and Curton stated that these additions should not be selected at random, but with the campus culture fit in mind. As Docking and Curton (2015) stated,

> The most effective way to grow enrollment is to leverage extracurricular and cocurricular activities designed to attract interested and academically capable students to campus. You must not simply implement teams and randomly add activities. The viable extracurricular and cocurricular activities you recruit for depend for success on your geographic area, your campus culture, the attitudes of your surrounding community, your personnel and facilities, and the types of students you hope to bring, or to bring more of, to campus. (p. 42)

The authors' strategic selection of additional sports and co-curricular programs is essential. Institutions must ensure that programs fit the culture and mission of the college (Beaver, 41; Dougherty & Dougherty, 2018).

### *Adding Athletics and Co-Curricular Programs*

Chaffee's adaptive approach called for several actions: market research, environmental trend monitoring, staffing flexibility, and expanded program offerings (Chaffee, 1984; Fugazzotto, 2009; Kezar, 2016). The expanded program offerings provide the basis for athletics program expansion and athletics roster management. According to Dougherty and Dougherty (2018), recruiting is a significant issue at small colleges and universities. According to the authors, football and other athletics programs present a promising way to change the male demographic on campus and increase enrollment. Dougherty and Dougherty (2018) cite studies that show that

NCAA Division II and NCAA Division III institutions that add football produce a large draw of male applicants. In his research, Feezell (2009) stated that small colleges use athletics to attract students who desire to keep competing, enabling these institutions to reach their enrollment targets. Feezell maintains that the addition of athletics programs, such as football, will provide gains for a college and university in four areas: entertainment, identity, identification, and revenue. The author maintains that adding football has an overall impact on the increase in men on campuses in Feezell's study (2009). In addition, research shows that when institutions increase their commitment to athletics and co-curricular expansion, there is an increased impact on enrollment (Cheslock & Knight, 2015; Docking & Curton, 2015; Feezell, 2009).

When adding these athletics programs, these institutions frequently require specific roster sizes to ensure that the benefits outweigh any potential negative effects. This practice is referred to as roster management, which is frequently used by NCAA Division III small private institutions (Docking & Curton, 2015; Sigelman & Carter, 1979).

Thomas More College President Dave Armstrong states, "I guarantee you we're making money on athletics. It's an enrollment driver" (Peale, 2013, para. 5). Thomas More College operates under NCAA Division III and cannot offer scholarships for athletics. According to Peale (2013), 400 of Thomas More College's 1900 students were athletes and brought in a net profit of $5.3 million. Additionally, Fairleigh Dickenson University has made a profit by adding men's volleyball and

women's lacrosse (Murphy, 2021). Fairleigh Dickenson is also an NCAA Division III institution and cannot offer athletic aid. Murphy (2021) states that adding the two sports has provided Fairleigh Dickenson with a net profit of $220,000 combined.

According to a recent article about Henderson State University in Arkansas, the institution sees athletics as an enrollment driver (Hale, 2022). In the article, a university spokesperson stated,

> Athletics is a substantial enrollment and revenue driver for Henderson, with around 500 student–athletes," Hankins added. "Division II is a partial scholarship model. For example, 150 football players split only 36 scholarships, and 50 baseball players share just 8 scholarships. So, we receive tuition and housing revenue, Pell grant revenue, lottery scholarship revenue, and many other benefits. (Hale, 2022, para. 22)

This article highlights the value that athletics brings to smaller institutions through enrollment.

HBCUs have often struggled financially to support athletics programs and invest in top facilities (Cooper et al., 2014). Facilities can make it difficult for these programs to attract student–athletes. NAIA HBCUs have a more challenging time attracting student–athletes because they are less visible than the NCAA Division I HBCUs, have smaller operating budgets, and have older facilities (Cooper et al., 2014). The authors also state that HBCUs must frequently supplement their budget with "guarantee games" against larger division opponents to generate revenue for the institution (Cooper et al., 2014). According to Cooper et al. (2014), these games often

bring in financial revenue, but they damage the morale of coaches and student–athletes. If the administration invests in facilities and coaches, NAIA HBCUs can use the athletics roster management model to leverage enrollment to generate institutional revenue (Docking & Curton, 2015; Dougherty & Dougherty, 2018).

### *Athletics Impact on University Image and Recruitment*

The literature shows that athletics can enhance a university's image if it manages its brand equity. Diel and Katsinas' (2018) study analyzing college and university advertising, typically broadcast during halftime football games, is an example of institutions using their brand equity. In addition, advertising is a crucial instrument utilized by colleges and universities to attract more out-of-state students to fill budgetary gaps (Brannigan & Morse, 2020; Diel & Katsinas, 2018; Sigelman & Carter, 1979; Smith, 2019).

According to Peterson-Horner and Eckstein (2015), the 1984 Boston College vs. University of Miami game that ended in a 47–45 victory for Boston College had a tremendous effect on Boston College admissions. On national television, Boston College's quarterback, Doug Flutie, completed a "Hail-Mary" pass to wide receiver Gerald Phelan. This significant televised athletic event increased Boston College's admissions applications by 30%. The authors cite the "Flutie Factor" to justify increasing athletic support and visible collegiate sports at universities of all shapes and sizes. For example, the University of Wisconsin-Whitewater experienced a similar "Flutie Factor" phenomenon the first time they appeared in the NCAA Division III Football National Championship (Docking & Curton, 2015). McEvoy et

al. (2013) research also showed increased out-of-state recruitment due to athletic prominence and success.

According to Feezell (2009), Division II athletics (1) boost enrollment in the middle student academic profile, (2) build enrollment in the male population, (3) increase the overall academic profile for women, (4) increase ethnic and geographic diversity, (5) enhance community service, and (6) generate optimal tuition revenue through smaller scholarships. In addition, athletics can improve less intangible areas of campus by improving campus climate and school spirit. Feezell (2009) states that these less intangible things are critical to attracting and retaining students.

### *Athletics and University Culture*

Feezell (2009) also suggested issues related to growing enrollments using athletics. Many faculties worry about "creeping athletic culture" on these enrollment-driven campuses and do not emphasize academic achievement. Moreover, athletic directors feel that athletic excellence -- or lack of it -- is the institution's increasing concern. According to Dougherty and Dougherty (2018), some are concerned that an emphasis on athletics is detrimental to student–athlete academic and social development. The authors recommend that "coaches and support staff must actively promote the social integration of their players within the larger campus community, as demonstrated by several institutions" (Dougherty & Dougherty, 2018, p. 146). Feezell's (2009) studies reference support for this statement.

Umbach et al. (2006) recognized the critical role intercollegiate teams play in the student body, creating social connections between non-athletes and student–

athletes. The authors in this study acknowledge concerns that athletics may lead to social isolation for student–athletes. According to Umbach et al. (2006), the research shows that student–athletes can develop valuable time management skills, which allows them to devote more time to extracurricular activities. One study of NCAA Division III basketball players, referenced by Umbach et al. (2006), showed that these athletes spent an average of 15 hours a week on homework and averaged over a 3.0 grade point average.

**Conclusion**

The literature review shows a thorough analysis of athletics as a component of the strategic enrollment plan. There is significant literature about college choice, marketing in higher education, rising tuition, and the factors influencing athletes and non-athletes to choose colleges and universities (Bandre, 2011; Snyder & Waterstone, 2015; Sparvero & Warner, 2013). Yet Chaffee's adaptive approach lists expanding program offerings as a way for institutions to grow enrollment (Chaffee, 1984; Docking & Curton, 2015). Athletics roster management is rooted in Chaffee's suggestion for struggling colleges to expand program offerings. The available research focuses on NCAA Division III institutions utilizing intercollegiate athletics to increase enrollment.

Utilizing athletics as a contribution to the college or university strategic plan, according to Docking and Curton (2015), requires initiative focused on academics first, followed by positive student and campus experiences. Institutions must make a significant investment in training enrollment managers to work with the coaching

staff to produce effective roster sizes. There must also be a considerable investment by the administration in coaches and facilities to create athletic opportunities and attract student–athletes (Cooper et al., 2014; Docking & Curton, 2015; Dougherty & Dougherty, 2018). While athletic success is essential to attract students, holding coaches and enrollment staff accountable for the institution's enrollment goal, while retaining student–athletes, is vital to the institution's survival (Brannigan & Morse, 2020; Diel & Katsinas, 2018; Docking & Curton, 2015; Sigelman & Carter, 1979).

The literature review identified several similar studies focused on NCAA Division III, nonprofit, four-year, private colleges in the Midwest. Unfortunately, there is little information about the impact of HBCU enrollment and even less information about HBCU athletics. Therefore, research on athletics roster management is significant because there is no research in this area. In addition, the research can assist small NAIA HBCUs in developing enrollment and retention strategies that provide the means to increase enrollment revenue.

# Chapter 3

## Methodology

The purpose of this quantitative study was to explore the impact of athletics roster management on enrollment and retention at small NAIA HBCUs. This chapter presents the research design for this study. It contains the following elements: (a) research design, (b) population and sampling, (c) HBCUs in the study, (d) data collection, and (e) data analysis. The results of this study can inform HBCU administrators on using athletic roster management and the impact on the enrollment and retention.

### Research Questions

Two research questions guided this study to investigate whether athletics plays a role in enrollment growth and retention for small NAIA HBCUs.

RQ1. How does using athletics roster management in athletics impact enrollment at small NAIA HBCUs?

RQ2. How does using athletics roster management impact retention at small NAIA HBCUs?

### Hypotheses

The researcher used quantitative data analysis to address the following hypotheses' significance and relationship to enrollment and retention at NAIA HBCUs.

**$H_0$1:** Institutions that use athletics roster management for athletics will not have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_a$1:** Institutions that use athletics roster management have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_0$2:** Institutions that use athletics roster management do not have significantly higher retention rates than institutions that do not use athletics roster management.

**$H_a$2:** Institutions that use athletics roster management have significantly higher retention rates than institutions that do not use athletics roster management.

## Research Design

This study used a quantitative, ex post facto, quasi-experimental research (Mertler, 2021). According to Mertler (2021), "Quantitative research relies on the collection and analysis of numerical data to describe, explain, predict, or control variables and phenomena of interest" (p. 108). Therefore, the researcher used the collection and analysis of numerical data to explain a phenomenon. In addition, the researcher studies the phenomenon without changing it (Simon & Goes, 2018).

Creswell and Creswell (2018) focused on quantitative experimental and survey designs. However, Simon and Goes (2018) described quantitative quasi-experimental studies as another educational research method. The researcher used a

quasi-experimental approach because the variables were not manipulated, and no treatment was controlled in the study; but, the research did not rely on random assignment, and the design aims to establish a cause and effect between the independent and dependent variables (Creswell & Creswell, 2018; Mertler, 2021; Simon & Goes, 2018). This study examined athletics roster management's impact on enrollment and retention at small NAIA HBCUs. The researcher chose an ex post facto design because the study used existing data on NAIA-member HBCUs from two different sources. Ex post facto research is an alternative to experimental research. This type of research can test a hypothesis about cause and effect or correlational relationships using existing data (Simon & Goes, 2018).

In addition to using the existing data, the researcher applied for IRB approval so that a survey could be conducted with the 24 NAIA HBCU athletic directors. The researcher needed the survey to determine which NAIA HBCUs used athletics roster management and which did not. Additionally, the researcher needed the athletic director’s permission to access the NAIA ROA database and participate in the study. Upon receiving IRB approval, the researcher created and distributed a survey asking three questions about the current athletic directors at the 24 NAIA HBCUs. The survey was designed, administered, and collected using Survey Monkey’s online survey tool.

**Population and Sampling**

Carlson (2014) found that in private colleges with fewer than 1,500 students enrolled, nearly half missed their goals for enrollment revenue. These data helped

identify the size of the institutions for the study. Although Carlson's data used less than 1,500 students, the researcher used less than 2,500 undergraduate students as the selection criteria for this study based on the enrollment of a few larger schools among the NAIA HBCUs. According to the Integrated Postsecondary Education Data System (IPEDS), which the National Center for Educational Statistics (NCES) maintains, there are only 84 four-year HBCUs exist in the United States (U.S. Department of Education, 2021). Furthermore, of those 84 institutions, all 24 NAIA HBCUs' undergraduate enrollment fell under 2,500 students in 2019 (U.S. Department of Education, 2021). The NAIA ROA database has data on 24-member HBCUs. The IPEDS database, NAIA membership, and HBCU status were used to select the sample institutions.

### *HBCUs in the Study*

The following criteria were considered in the sample selection: must be an HBCU, must be a member of the NAIA, and must have an enrollment of less than 2,500 undergraduate students. Based on these factors, the selected institutions were from the southern, southeastern, and southwestern regions of the United States. In addition, the researcher noted that only eight institutions were members of the Gulf Coast Athletic Conference, the only HBCU conference in the NAIA. Other institutions in the study were members of PWI conferences or independents.

Although the institutions were HBCUs, they do not always belong to athletics conferences made up of all HBCUs. The conference affiliation is noted because research shows that HBCUs in non-HBCU conferences have different experiences

and interactions (Dix, 2022). The researcher noted that these experiences and interactions might account for differences in enrollment and retention.

The researcher focused only on the NAIA athletic governing body to increase the study's significance. The research can assist other small HBCUs that might explore joining the NAIA with impactful strategic enrollment and retention data. The NAIA has collected data on all member institutions' athletic return on investment ("Return on Athletics", 2021). The researcher focused on the impact of enrollment and retention on the 24 NAIA HBCUs. Two institutions, Edward Waters University and Allen University, were leaving the NAIA and transitioning to NCAA Division II during the study. Although they were leaving the NAIA, these institutions were still HBCU members of the NAIA during the years used for this research.

Additionally, Paul Quinn University was an associate member of the NAIA due to its accreditation by a national accrediting agency, the Transnational Association of Christian Colleges and Schools (TRACS). TRACS is a nationally recognized accreditation by the U.S. Department of Higher Education (James et al., 2022). The NAIA only recognizes regional accreditation agencies for full membership ("About us," 2021). Paul Quinn University competes within the NAIA as a member of the Red River Athletic Conference, but the school was not eligible for the NAIA postseason and championships. Although they were an associate NAIA member, Paul Quinn submitted data to the NAIA ROA database. Furthermore, Arkansas Baptist University has also been provisionally admitted to the NAIA, but

their data were also used for the study. Table 1 provides a list of the 24 NAIA HBCUs in 2020.

**Table 1**

*NAIA Member HBCUs*

| Institution |
|---|
| Allen University*** |
| Arkansas Baptist College* |
| Dillard University |
| Edward Waters College*** |
| Fisk University |
| Florida Memorial University # |
| Harris-Stowe State University |
| Huston-Tillotson University |
| Jarvis Christian University |
| Langston University |
| Morris College |
| Paul Quinn College** |
| Philander Smith College |
| Rust College |
| Southern University of New Orleans $ |
| Stillman College |
| Talladega College |
| Texas College # |
| Tougaloo College |
| University of the Virgin Islands |
| Voorhees College |
| Wilberforce University |
| Wiley College |
| Xavier University of Louisiana |

*Note. Arkansas Baptist College* is not a full member of the NAIA. Paul Quinn College** was an associate member of NAIA. Edward Waters University*** and Allen University*** were transitioning to NCAA Division II. Florida Memorial University # and Texas College # chose to be non-participants. Southern University of New Orleans $ just reinstated athletics in 2020.*

On some HBCU campuses, the athletic and admissions departments often operate in silos and do not communicate effectively. Athletics recruitment, in this case, was not considered when calculating the strategic enrollment and retention management plan. In other instances, these two departments work in tandem. The athletics department should be an extension of the admissions office with specific recruitment goals. These goals are factored into the overall enrollment management strategy. The primary focuses of the study were athletic sports rosters, the institution's yearly enrollment numbers, and retention statistics.

**Data Collection**

First, the researcher requested an IRB waiver. However, the study required the researcher to ask the 24 NAIA HBCU member athletics directors three questions, so IRB approval was required. The Morehead State University IRB office was contacted to clarify whether the research required IRB approval or an IRB waiver before the study began. Once the researcher received clarification that IRB approval was required because a survey of the 24 NAIA HBCU athletics directors would be used, an IRB application was completed, and the IRB approval was obtained. Second, the researcher created the survey and an accompanying email for the three-question survey.

Additionally, the researcher sent out a survey to the 24 HBCU members of the NAIA to ascertain (1) if they used athletics roster management; (2) when they began using athletics roster management; and (3) if they granted consent for their NAIA ROA data to be used in the study. In addition, the survey included an informed

consent acknowledgment statement for participation in the research and a description of why they were selected for the researcher's study. The survey was sent to athletics directors at each institution via email. The athletics directors had to have access to a computer or cell phone to complete the survey link hosted by Survey Monkey and receive the informed consent form sent via email. The athletics directors received an email that discussed the purpose of the study, information about how the ROA data were used in the study, and a permission request to use their ROA data. The survey cover letter also provided the respondents with the research objectives, data collection, and analysis methods and offered interpretations upon request. The researcher followed up the email with additional email prompts and phone calls to the 24 athletics directors to encourage them to complete the survey and answer any questions about the research.

Once the researcher received responses from the surveys, the researcher obtained data on each NAIA HBCU from IPEDS. IPEDS data is publicly available and does not require any special permission. Additionally, the researcher used data obtained from the NAIA ROA. The researcher evaluated both sets of data for the HBCUs in the study and determined the appropriate fiscal year to analyze. First, the researcher accessed the IPEDS data from 2017–2020. According to the IPEDS, the data at the time of this study were only available through the fiscal year 2020 (U.S. Department of Education, 2021). Next, the researcher obtained retention and enrollment data from the NAIA ROA office. After reviewing the data from the NAIA ROA database, the researcher determined that the analysis of fiscal year 2019

enrollment data would be best. All the NAIA HBCUs had submitted enrollment data for fiscal year 2019.

Additionally, the researcher determined that the NAIA ROA fiscal year 2020 retention data were the most complete data submitted by the member HBCUs to answer RQ2. According to Alan Grosbach, "The COVID-19 pandemic affected institutions submitting enrollment data in the fiscal year 2020. Additionally, the NAIA ROA database only started collecting retention data on all NAIA institutions in 2019, and many institutions did not submit complete data" (Alan Grosbach, personal communication, January 27, 2023). Finally, the researcher needed the most complete data sets on enrollment and retention to answer the RQs guiding this study.

**Data Analysis**

Once the data were obtained from IPEDS and the NAIA ROA database, the researcher used the SPSS software package to calculate the descriptive and inferential statistics. To analyze the significance of the one-directional influence between the research hypotheses, the researcher used a one-tailed t-test. A .05 significance level was used in this study.

According to Ruxton (2010), a one-tailed t-test can be used because the research hypotheses are directional. Kenton (2023) further states one-tailed *t*-tests are designed to show that a sample mean is higher or lower than a population mean. Before testing the mean, the researcher established a null and an alternative hypothesis for each RQ; the null hypothesis is the theory examined (Kenton, 2023). In this study, the researcher used a one-tailed *t*-test to reject or accept the null

hypotheses of RQ1 and RQ2. The RQs guided the research whether HBCUs using athletics roster management have higher enrollment and retention rates than institutions that do not. The researcher's analysis explored whether athletics roster management benefits institutional enrollment and retention. In addition, the researcher calculated the confidence intervals for the tests.

As a part of an ex post facto study, the researcher conducted a correlation of the enrollment and retention at HBCUs that use athletic roster management. According to Simon and Goes (2018), correlation is used to determine “how closely the variables are related” (p. 97). A Pearson's correlation coefficient analysis was calculated to analyze the relationship direction and strength of enrollment and retention at the institutions that use athletic roster management (Mertler, 2021; Simon & Goes, 2018). According to Mertler (2021), Pearson's correlation coefficient describes the linear direction and strength of the relationship between two quantitative variables. In this study, the researcher looked at the relationship between the total number of athletes in the department and the institution's total enrollment. Additionally, the study examined the athletic department retention percentage in relation to the overall institution retention percentage of institutions that use athletic roster management.

# Chapter 4

## Results and Findings

The purpose of this quantitative, quasi-experimental, ex post facto research was to explore athletics roster management's impact on enrollment and retention at small NAIA HBCUs. Chapters 1 and 2 presented a rationale for the study, and the relevant literature was reviewed. The methodology for the researcher's study was described in chapter 3. This chapter presents the results of the research. The data were analyzed to answer the following research questions.

### Research Questions

The research compared data on the 24 NAIA HBCUs from the IPEDS and NAIA ROA databases to answer the research questions. The research questions for the study were designed by the researcher based on a review of the literature and the researchers' experience. The following questions guided the research:

RQ1. How does using athletics roster management in athletics impact enrollment at small NAIA HBCUs?

RQ2. How does using athletics roster management impact retention at small NAIA HBCUs?

### Hypotheses

The researcher used a quantitative ex post facto data analysis to address the following hypotheses about enrollment and retention at HBCUs.

**$H_0$1:** Institutions that use athletics roster management for athletics will not have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_a$1:** Institutions that use athletics roster management have significantly higher enrollment rates than institutions that do not use athletics roster management.

**$H_0$2:** Institutions that use athletics roster management do not have significantly higher retention rates than institutions that do not use athletics roster management.

**$H_a$2:** Institutions that use athletics roster management have significantly higher retention rates than institutions that do not use athletics roster management.

**Survey Description**

The researcher created a survey instrument for 24 NAIA HBCU athletics directors. The survey was designed using the body of research and the researcher's experience. The survey asked the following questions:

(1) Question 1: Informed consent acknowledgement.

(2) Question 2: Do you use athletics roster management?

(3) Question 3: If you answered yes to the question above, what academic year did you start using athletics roster management?

(4) Question 4: For this study, do you permit Nathan Cochran to utilize your National Association of Intercollegiate Athletics (NAIA) Return on Athletics

(ROA) data? By selecting "Yes," you allow the NAIA national office permission to share your NAIA ROA data with Nathan Cochran for this doctoral capstone research study at Morehead State University.

A total of 22 athletics directors out of 24 responded to the survey. Notably, the researcher emailed and called each of the 24 athletics directors while the survey was open for 11 weeks to collect the total number of responses. The researcher wanted to ensure that the study received a response from each of the 24 NAIA HBCU institutions. Twelve of the 24 athletics directors responded to the original email in the first two weeks after the survey instrument was sent out. The researcher sent weekly follow-up emails to the 12 athletics directors who had not responded.

The researcher obtained 19 survey responses from the 24 NAIA HBCU athletics directors eight weeks after the original survey instrument was sent out. Next, the researcher began to call, text message, and email the last five athletics directors to encourage their participation in the study and answer any questions they had. In the 11th week, the researcher received 22 of the 24 athletics director survey responses and spoke to the two athletics directors who declined to participate.

The researcher followed up with several emails and contacted the athletics directors by phone. One athletics director explained that he would not share data because they did not have any data to share due to the institution suspending athletics for three years (Athletics director #2, personal communication, July 10, 2022). Two athletics directors said that they would not share their data for the study (Athletics Director 1, personal communication, June 24, 2022; Athletics Director 3, personal

communication, August 9, 2022). The response rate was 91.6%. Of the 22 respondents, 21 agreed to allow the researcher to use the NAIA ROA data for the research. Because 91.6% of HBCU athletics directors responded to the survey, the effect of nonresponse on the survey was low (Creswell & Creswell, 2018). Therefore, there is no response bias because the athletics directors' nonresponses effectively state that they do not consent for their NAIA ROA data to be used in the study.

Table 2 provides descriptive information regarding survey Question Two: Are you using athletics roster management? Twenty-two athletics directors from the 24 HBCUs in the NAIA responded to this question. Of the 22 athletics directors who responded, 10 (45.4%) indicated that they used athletics roster management.

**Table 2**

*Do You Use Athletics Roster Management?*

| Institution | Response |
|---|---|
| Allen University | Yes |
| Arkansas Baptist College* | Yes |
| Dillard University | Yes |
| Edward Waters College | Yes |
| Fisk University | No |
| Harris-Stowe State University | No |
| Huston-Tillotson University | Yes |
| Jarvis Christian University | No |
| Langston University | Yes |
| Morris College | No |
| Paul Quinn College | No |
| Philander Smith College | Yes |
| Rust College | No |
| Southern University of New Orleans | Yes |
| Stillman College | No |
| Talladega College | No |
| Tougaloo College | No |
| University of the Virgin Islands | Yes |
| Voorhees College | No |
| Wilberforce University | No |
| Wiley College | No |
| Xavier University of Louisiana | Yes |

*Note. Arkansas Baptist College* is not a full member of the NAIA. Florida Memorial University and Texas College chose to be non-participants. The Southern University of New Orleans responded but declined further participation.*

Table 3 reflects nine of the 10 athletics directors (45.4% of respondents) who indicated that they use athletics roster management. Southern University of New Orleans is not represented in Table 3 because they recently began using athletic roster management and indicated "zero" years. Although Southern University of New Orleans indicated the use of athletic roster management, they were excluded from Table 3. Southern University of New Orleans just reinstituted athletics and declined to participate further in the study. Edward Waters University and Allen University were leaving the NAIA for NCAA Division II, but they were still considered members of the NAIA at the time of this research. Table 3 shows how long each institution has used athletics roster management and the average number of years for all eight institutions listed in the table. The average of all institutions that used athletics roster management was 5.3 years. Based on this number, the researcher selected the IPEDS data from 2017–2020 for the second analysis in this study. The IPEDS data were two years behind the current year; therefore, data were only available up to 2020 (U.S. Department of Education, 2021).

**Table 3**

*Years Using Athletics Roster Management*

| Institution | Years using ARM |
|---|---|
| Allen University | 6 |
| Arkansas Baptist* | 2 |
| Dillard University | 13 |
| Edward Waters College | 7 |
| Huston-Tillotson University | 3 |
| Langston University | 1 |
| Philander Smith College | 5 |
| University of the Virgin Islands | 7 |
| Xavier University of Louisiana | 9 |
| Average years of athletic roster management (ARM) | 5.3 |

*Note. ARM = Athletic roster management. The researcher used the actual academic years provided by the survey to determine the number of years using athletics roster management. Arkansas Baptist College* is not a full member of the NAIA but their data is included in the research.*

**Research Findings**

This research used a one-tailed *t*-test and Pearson's correlation coefficient to examine the impact and the correlation between HBCUs using athletics roster management and having higher enrollment. In addition, a second one-tailed *t*-test and Pearson's correlation coefficient were utilized to evaluate the impact and relationship of retention at institutions utilizing athletics roster management. The NAIA HBCUs were separated into two groups based on their survey responses: (1) HBCUs that use athletics roster management and (2) HBCUs that do not. The data of 21 HBCUs that agreed to allow the use of their data were downloaded from the IPEDS database. The

researcher created two tables based on the institutions' reported full-time enrollment (FTE) (Table 4) and retention rates in percentages (Table 5).

**Table 4**

*NAIA HBCU Enrollment Data (IPEDS)*

| Institution Name | FTE 20 | FTE 19 | FTE 18 | FTE 17 | *M* | *SD* |
|---|---|---|---|---|---|---|
| Allen University* | 577 | 715 | 654 | 563 | 627.3 | 70.9 |
| Arkansas Baptist College* | 287 | 460 | 460 | 496 | 425.8 | 94.0 |
| Dillard University* | 1,152 | 1,155 | 1,223 | 1,200 | 1,182.5 | 34.8 |
| Edward Waters Univ.* | 921 | 862 | 925 | 853 | 890.3 | 38.0 |
| Fisk University | 851 | 822 | 716 | 639 | 757.0 | 97.8 |
| Harris-Stowe State Univ. | 1,056 | 1,371 | 1,398 | 1,163 | 1,247.0 | 165.0 |
| Huston-Tillotson Univ.* | 975 | 1,026 | 1,035 | 1,003 | 1,009.8 | 26.8 |
| Jarvis Christian Univ. | 474 | 832 | 932 | 835 | 766.0 | 199.2 |
| Langston University* | 1,750 | 1,873 | 1,720 | 1,822 | 1,791.3 | 69.3 |
| Morris College | 366 | 578 | 633 | 731 | 577.0 | 154.3 |
| Paul Quinn College | 428 | 525 | 521 | 492 | 491.5 | 44.8 |
| Philander Smith College* | 699 | 951 | 955 | 845 | 862.5 | 120.3 |
| Rust College | 670 | 679 | 761 | 792 | 725.5 | 60.3 |
| Stillman College | 650 | 795 | 660 | 552 | 664.3 | 99.9 |
| Talladega College | 1,097 | 1,082 | 1,088 | 762 | 1,002.3 | 163.6 |
| Tougaloo College | 655 | 678 | 696 | 766 | 698.8 | 47.9 |
| Univ. of the Virgin Islands* | 1,034 | 1,251 | 1,223 | 1,275 | 1,195.8 | 109.9 |
| Voorhees College | 340 | 505 | 480 | 464 | 447.3 | 73.5 |
| Wilberforce University | 404 | 497 | 565 | 489 | 488.8 | 66.0 |
| Wiley College | 555 | 672 | 877 | 1,188 | 823.0 | 277.3 |
| Xavier Univ. of Louisiana* | 2,406 | 2,424 | 2,357 | 2,155 | 2,335.5 | 123.6 |

*Note. These data represent full-time undergraduate enrollment for 2017-2020 (FTE). The final columns are the mean and standard deviation of each institution's four-year FTE. Represents* the institutions who use ARM.*

**Table 5**

*NAIA HBCU Retention Data (IPEDS)*

| Institution Name | FTE 20 | FTE 19 | FTE 18 | FTE 17 | *M* | *SD* |
|---|---|---|---|---|---|---|
| Allen University* | 50 | 56 | 37 | 36 | 44.8 | 9.8 |
| Arkansas Baptist College* | 43 | 36 | 50 | 40 | 42.3 | 5.9 |
| Dillard University* | 70 | 67 | 69 | 70 | 69.0 | 1.4 |
| Edward Waters Univ.* | 54 | 53 | 54 | 60 | 55.3 | 3.2 |
| Fisk University | 80 | 78 | 81 | 81 | 80.0 | 1.4 |
| Harris-Stowe State Univ. | 64 | 55 | 65 | 55 | 59.8 | 5.5 |
| Huston-Tillotson Univ.* | 54 | 56 | 64 | 51 | 56.3 | 5.6 |
| Jarvis Christian Univ. | 53 | 47 | 57 | 42 | 49.3 | 6.6 |
| Langston University* | 55 | 60 | 52 | 55 | 55.5 | 3.3 |
| Morris College | 36 | 40 | 50 | 48 | 43.5 | 6.6 |
| Paul Quinn College | 56 | 57 | 68 | 62 | 60.8 | 5.5 |
| Philander Smith College* | 58 | 66 | 69 | 58 | 62.8 | 5.6 |
| Rust College | 56 | 44 | 49 | 76 | 56.3 | 14.1 |
| Stillman College | 56 | 63 | 68 | 52 | 59.8 | 7.1 |
| Talladega College | 65 | 64 | 70 | 64 | 65.8 | 2.9 |
| Tougaloo College | 70 | 73 | 74 | 68 | 71.3 | 2.8 |
| Univ. of the Virgin Islands* | 63 | 66 | 77 | 67 | 68.3 | 6.1 |
| Voorhees College | 55 | 61 | 55 | 55 | 56.5 | 3.0 |
| Wilberforce University | 35 | 47 | 39 | 38 | 39.8 | 5.1 |
| Wiley College | 70 | 51 | 39 | 56 | 54.0 | 12.8 |
| Xavier Univ. of Louisiana* | 77 | 70 | 75 | 72 | 73.5 | 3.1 |

*Note. The information was measured in percentages. These data represent the full-time undergraduate retention rate percentages for 2017-2020 (FTR). The final columns are the mean and standard deviation of each institution's four-year FTR. Represents* the institutions who use ARM.*

## Impact of Athletics Roster Management on Enrollment

***Null Hypothesis*:** Institutions that use athletics roster management for athletics will not have higher enrollment rates than institutions that do not use athletics roster management.

The researcher used inferential statistics for the comparative outcomes between the two groups. The inferential statistics in Table 6 allow the researcher to present the data in an understandable and meaningful way (Mertler, 2021). Inferential statistics also allow the researcher to facilitate data visualization (Creswell & Creswell, 2018; Mertler, 2021). The variables were independent, and the null hypothesis stated that NAIA HBCUs that use athletics roster management would not have higher enrollment rates than those that do not.

### *One-tail t-test for Enrollment*

A two-sample, one-tail *t*-test was performed to compare the enrollment of 2019 HBCUs that use athletics roster management to those that do not. The mean enrollment for the institutions using athletics roster management was 1146.72 (*SD* = 590.261), and the mean of the HBCUs that did not use athletics roster management was 711.68 (*SD* = 233.424); $t(19) = 1.973$, $p = .032$, $d = 0.87$. The data indicated a significant difference in the enrollment at HBCUs that use athletic roster management, so the null hypothesis was rejected at the .05 significance level. Table 6 presents the descriptive data from the *t*-test.

**Table 6**

*Enrollment t-test of HBCUs Using ARM vs. HBCUs That Do Not*

| | N | M | SD | *df* | *t* | *p* | *d* | *95% Conf. Int.* |
|---|---|---|---|---|---|---|---|---|
| Use ARM | 9 | 1,146.72 | 590.26 | 19 | 1.973 | .032 | 0.87 | [-333.35 – 630.06] |
| No ARM | 12 | 711.69 | 233.42 | | | | | |

*Note. Athletic roster management (ARM). This t-test was one-tailed.*

***Pearson Correlation Coefficient for Enrollment***

A Pearson correlation coefficient analysis of the athletic department enrollment and university enrollment for institutions identified using athletics roster management was calculated for 2019. As stated before, the researcher selected this year because it had a complete NAIA ROA dataset for each HBCU that could be compared to the IPEDS undergraduate enrollment data. Table 7 shows the athletic department enrollment from the 2019 NAIA ROA roster data ($M$ = 156, $SD$ = 73.97) and the university enrollment obtained from the 2019 IPEDS full-time undergraduate enrollment ($M$ = 1282.13, $SD$ = 578.61) for HBCUs who identified that they use athletics roster management. Arkansas Baptist University did not submit data to the NAIA ROA for 2019 and therefore were not reflected in Table 7.

**Table 7**

*Enrollment Data of HBCUs Using Athletics Roster Management*

| Institution | Athletic Department Enrollment | University Enrollment |
|---|---|---|
| Allen University | 217 | 715 |
| Dillard University | 139 | 1,155 |
| Edward Waters College | 223 | 862 |
| Huston-Tillotson Univ. | 189 | 1,026 |
| Langston University | 237 | 1,873 |
| Philander Smith College | 46 | 951 |
| Univ. of the Virgin Islands | 57 | 1,251 |
| Xavier Univ. of Louisiana | 140 | 2,424 |

The data in Table 7 were used to calculate the Pearson's *r* correlation coefficient. Pearson's data analysis revealed a weak positive correlation $r = 0.0002$, $p = .99$. According to Cherry (2022), "a weak positive correlation indicates that, although both variables tend to go up in response to one another, the relationship is not very strong" (p. 3). Although the results were positive, the data show nearly zero relationship between NAIA HBCUs' increased athletics rosters and full-time undergraduate enrollment for institutions that use athletics roster management.

## Impact of Athletics Roster Management on Retention

***Null Hypothesis*:** Institutions that use athletics roster management do not have higher retention rates than institutions that do not use athletics roster management.

For the retention null-hypothesis, inferential statistics were also more suitable for obtaining the comparative outcomes between the small NAIA HBCUs that use athletics roster management and those that do not. The variables were independent, and the null hypothesis was that institutions that use athletics roster management would not have higher retention rates than those that do not.

### *One-tail t-test for Retention*

A two-sample *t*-test was conducted to compare the 2020 retention percentage at HBCUs that use athletic roster management and those that do not. The mean retention percentage for the institutions using athletics roster management was 58.61% ($SD$ = 10.75), and HBCUs that did not use athletics roster management had a mean retention of 58.08% ($SD$ = 11.14). The research analysis showed no significant difference, $t(19) = 0.11$, $p = .45$, $d = 0.05$, between the two HBCU groups, so the null hypothesis was not rejected at the .05 significance level. Furthermore, Table 8 provides the descriptive data of the one-tailed HBCU retention *t*-test. These results do not support the hypothesis that institutions that use athletics roster management have higher retention rates.

**Table 8**

*Retention t-test of HBCUs Using ARM vs. HBCUs That Do Not*

| | N | M | SD | *df* | *t* | *p* | *d* | *95% Conf. Int.* |
|---|---|---|---|---|---|---|---|---|
| Use ARM | 9 | 58.61 | 10.75 | 19 | 0.11 | .45 | 0.05 | [-30.59 – 2.35] |
| No ARM | 12 | 58.08 | 11.14 | | | | | |

*Note. Athletics roster management (ARM). This t-test was one-tailed.*

***Pearson Correlation Coefficient for Retention***

A Pearson correlation coefficient analysis of the athletic retention and university retention for institutions identified using athletics roster management was calculated for 2020. As mentioned in Chapter Three, the researcher selected this year because it had a complete NAIA ROA dataset for each HBCU that could be compared to the IPEDS undergraduate retention data. Three institutions, Allen University, Arkansas Baptist University, and Philander Smith College, did not provide NAIA ROA retention data for 2020 due to the COVID-19 pandemic. Table 9 shows the athletic retention from the 2020 NAIA ROA retention data ($M$ = 41.83%, $SD$ = 20.33) and the university retention obtained from the 2020 IPEDS full-time undergraduate retention data ($M$ = 62.17%, $SD$ = 9.66) for the HBCUs who identified that they use athletics roster management.

**Table 9**

*Retention Data for HBCUs Using Athletics Roster Management*

| Institution | Athletic Retention | University Retention |
|---|---|---|
| Dillard University | 50 | 70 |
| Edward Waters College | 52 | 54 |
| Huston-Tillotson Univ. | 69 | 54 |
| Langston University | 35 | 55 |
| Univ. of the Virgin Islands | 9 | 63 |
| Xavier Univ. of Louisiana | 36 | 77 |

*Note. The information was measured in percentages. In 2020, Allen University and Philander Smith College did not have data reported to the NAIA for retention.*

The data in Table 9 were used to calculate Pearson's *r* correlation coefficient. Pearson's data analysis revealed a weak negative correlation $r = -0.31$, $p = .55$. The results show that the NAIA HBCUs' athletic retention is inversely related to increased undergraduate retention for institutions that use athletics roster management.

**Summary of Findings**

This chapter presents the findings of this quantitative research study aimed at exploring athletics roster management's impact on enrollment and retention at small NAIA HBCUs. Furthermore, this study analyzed the relationship of the athletic enrollment and retention to the university enrollment and retention of NAIA HBCUs that use athletic roster management. The enrollment data were analyzed using a one-tailed *t*-test showed a significant difference, suggesting that HBCUs that use athletics roster management have higher enrollment. Additionally, Pearson's correlation

coefficient data suggest that NAIA HBCU institutions that use athletics roster management have almost zero relationship between their university enrollment and athletics enrollment. Conversely, the *t*-test analysis of retention for NAIA HBCUs that use athletic roster management did not show a significant difference in the retention rates of those institutions that do not. Furthermore, Pearson's correlation coefficient shows that NAIA HBCUs that use athletic roster management have an inversely related retention in the athletic department compared to the overall university retention.

# Chapter 5

## Conclusions and Discussion

This chapter concludes and discusses the findings of the research. The purpose of this study is to explore athletics roster management's impact on enrollment and retention at small NAIA HBCUs. The study was conducted with a purposeful sample of 24 NAIA HBCUs. Twenty-two institutions responded to the research survey, and twenty-one NAIA HBCUs agreed to participate. The quantitative quasi-experimental ex post facto research explored athletics roster management's impact on enrollment and retention using existing data from IPEDS and the NAIA ROA database. Two research questions guided this research:

RQ1. How does using athletics roster management in athletics impact enrollment at small NAIA HBCUs?

RQ2. How does using athletics roster management in athletics impact enrollment at small NAIA HBCUs?

This chapter examines the summary of the findings and the discussion. In addition, this chapter addresses the limitations, implications, and recommendations of the research.

### Summary of Findings

The researcher examined the enrollment impact of athletics roster management on small NAIA HBCUs in the study. The findings from the one-way t-test analysis indicated a significant difference for NAIA HBCUs that use athletics roster management having higher overall institution enrollment than those that do not.

In addition, Pearson's *r* correlation coefficient indicated almost zero relationship between higher athletic rosters and higher university enrollment for HBCUs using athletic roster management. Therefore, the analysis cannot conclude a relationship between NAIA HBCUs that make teams use athletics roster management and having higher institution enrollment. Even though the data says HBCUs that use athletic roster management have higher enrollment, there is almost no relationship between athletic enrollment and university enrollment at HBCUs that use athletic roster management.

Additionally, the researcher investigated the impact on retention percentages of NAIA HBCUs that use athletic roster management. The one-way t-test indicated that there is no significant difference between NAIA HBCUs using athletics roster management having higher retention percentages than the institutions that do not. Therefore, both sets of HBCUs have the same retention. Furthermore, the researcher looked to see if NAIA HBCUs that use athletic roster management had a relationship between athletic retention and university retention. Pearson's r correlation coefficient indicated an inverse relationship between athletic retention and the university retention percentages at NAIA HBCUs that use athletic roster management.

**Discussion**

In the enrollment and athletic roster management analysis, Pearson's coefficient correlation test indicated a weak positive correlation. According to Cherry (2022), this means that when "both variables tend to go up in response to one another, the relationship is not very strong" (p. 3). Nevertheless, the correlation data was

almost zero. Therefore, it cannot be deduced from the data that NAIA HBCUs using athletics roster management, and having a sizeable athletic enrollment, have a relationship with the size of the overall university enrollment. However, the inferential data shows that NAIA HBCUs using athletics roster management have higher enrollment than NAIA HBCUs that do not use it.

The theory that guided this study was Chaffee's adaptive approach and specifically expanded program offerings (Chaffee, 1984; Fugazzotto, 2009; Kezar, 2016). The expanded program offerings encompass adding athletics programs and using athletics roster management. The literature shows that small colleges need to recruit and grow enrollment through athletics programs (Dougherty & Dougherty, 2018). The small colleges in this study were NAIA HBCUs. The data analysis can infer that NAIA HBCUs have higher university enrollment when institutions commit to athletics and require coaches to meet minimum roster requirements (Docking & Curton, 2015; Feezell, 2009).

In the analysis of athletic roster management impact on retention percentages, inverse relationship at NAIA HBCUs using athletic roster management. As one percentage went up, the other went down (Cherry, 2022). In addition, the one-tailed *t*-test indicated no significant difference. Therefore, NAIA HBCUs that use athletics roster management do not have higher retention rates for their institutions. Instead, the researcher interpreted the data to say that when athletics retention decreases, university retention increases. According to the literature, while increasing enrollment at institutions is positive, universities must ensure student–athletes have a good

experience so that they will matriculate and graduate (Dougherty & Dougherty, 2018).

While the study showed an inverse relationship between athletics roster management and retention, the literature recommends that athletics actively promote social integration of the student–athletes into the larger campus community to retain the student–athletes (Dougherty & Dougherty, 2018; Feezell, 2009). This integration is also supported by Cooper and Hall's (2016) study, which showed that student–athletes attending HBCUs experience positive experiences outside athletics that increase achievement and retention. Therefore, NAIA HBCUs that use athletics roster management must focus on strategies to connect student-athletes with the more significant college or university community to increase their athletic retention (Cooper & Hall, 2016).

**Limitations of Study**

This research was limited by the selection of 24 HBCUs from the NAIA. Additionally, due to the focus being on only NAIA institutions, this study may not be generalizable to HBCU members of the NCAA. Although the governing bodies are similar, the researcher can only address the data gathered on the NAIA HBCUs. Future research should include HBCUs from NCAA Division II, which will expand the breadth of the study. NCAA Division II and NAIA HBCUs are similar in enrollment, scholarships, and institutional profile ("A Closer Look – NAIA and NCAA D2", 2021). The expanded research would make the study generalizable to more HBCUs.

A second limitation is that this study did not obtain the perspectives of athletic administrators or student–athletes. Therefore, the researcher cannot ascertain the reasons for the negative relationship between athletics roster management and retention at NAIA HBCUs. Further research using a mixed-methods study might provide a more thorough interpretation of the retention factors at NAIA HBCUs. The mixed-method research can also provide insight into the athletics administrators, coaches, and admissions administrators' feelings on athletics roster management. In addition, this data could get the coaches' and student–athletes' perspectives on the importance of institutional financial support and facilities in recruiting. Finally, the rich data from the expanded study could help determine the athletic impacts that affect a student's decision not to remain at an institution.

The third limitation is the NAIA ROA data used in the study. The NAIA ROA program is relatively new to athletics programs in the entire governing body ("Return on Athletics", 2021). Two NAIA HBCU programs in this research had been in the pilot program for five and eight years ("Return on Athletics", 2021). The data collection was new for all NAIA institutions, thus causing collection gaps. The COVID-19 pandemic further complicated these gaps because several NAIA HBCUs did not participate in athletics during the 2020–2021 academic year (Alan Grosbach, personal communication, May 28, 2022). The NAIA ROA office also stated that retention was newer data that they started collecting. Due to the incomplete data, the researcher had to select different years in the enrollment (2019) and retention (2020).

The research should be replicated again with datasets over multiple years to validate the conclusions of this study.

### *Delimitations of Study*

According to Simon and Goes (2018), delimitations of research are the exclusionary and inclusionary limitations made during the development of a study. The researcher decided in the beginning to narrow the concentration of this study. First, small HBCUs with enrollments under 2500 students were selected for this research to narrow the focus of the study results. These institutions were selected because the research stated that small colleges were the most enrollment-dependent (Docking & Curton, 2015). Additionally, the researcher purposefully selected HBCUs that were members of the NAIA to narrow the scope of the research. This purposeful selection removed small HBCUs that were members of NCAA Division II that would have qualified for the research because they have enrollments below 2500 students.

### Implications of Study

This research has expanded the literature base on NAIA HBCUs, athletics roster management, enrollment management, and retention in higher education. Further investigation into these topics should expand the scope of research to compare NAIA HBCU performance to that of NAIA PWIs. Future research could look at the disparities or advantages of different institutions. Collecting comparison information on all NAIA institutions could expand the knowledge base and provide vital information for administrators exploring the benefits of small college participation in the NAIA.

Quantitative research shows the relationship between the variables, but expanding the study using mixed methods would allow the researcher to glean more information from the data. In addition, personal interviews with the student–athletes, coaches, and administrators would provide more clarity for the variables in this research.

**Recommendations**

NAIA HBCUs should work to incorporate athletics roster management into the strategic enrollment plan developed for each institution. Athletic directors should work with the director of enrollment and the chief financial officer of their current institution to develop viable roster goals for each athletics program. The institution must invest resources in athletics so that each athletics program has a full-time coach or coaches that can focus on recruiting (Docking & Curton, 2015). In addition, full-time coaches should be an extension of the admissions office. They should be held accountable for adding a specified number of new athletic recruits to their athletics rosters to ensure the institution's overall enrollment goal is met. Additionally, research shows that athletics at small NAIA HBCUs must remain competitive in sports while helping increase enrollment to ensure the institution's financial survival (Brannigan & Morse, 2020; Diel & Katsinas, 2018; Docking & Curton, 2015; Sigelman & Carter, 1979).

According to Cooper et al. (2014), HBCUs often face limited resources and inadequate support for athletics programs. Small NAIA HBCUs have limited resources, often making it difficult to invest in athletics programs over other

institutional needs. Institutions should not sacrifice athletic excellence for the sake of large athletics rosters. Poorly funded athletics programs with large rosters can lead to student–athlete dissatisfaction and can affect retention (Docking & Curton, 2015; Dougherty & Dougherty, 2018).

This research supports Chaffee's (1984) adaptive approach. The study shows that athletics roster management can be a practical component of an NAIA HBCU strategic enrollment plan. The research shows a significant difference in enrollment at NAIA HBCUs that use athletic roster management. Additionally, the literature highlights that systems must be in place to retain student–athletes on increased rosters. The literature also shows that integrating student–athletes into the NAIA HBCU culture will assist these institutions in retention (Dougherty & Dougherty, 2018; Feezell, 2009). This research is valuable because it provides data to support Chaffee's (1984) adaptive approach theory for NAIA HBCUs looking to increase enrollment and address budgeting issues for these institutions. Lastly, this study offers NAIA HBCU administrators data to assist them in considering athletic return on investment through increased enrollment.

This study expanded the body of literature regarding small NAIA HBCUs using athletics roster management to increase enrollment and retention. According to the research, when correctly utilized, athletics programs can be a vital tool in helping colleges reach their enrollment goals. In addition, the research shows that NAIA HBCU administrators must work to find optimal athletics roster sizes so that athletics contribute to enrollment but do not affect it. Finally, this study is impactful because

the previous literature focused only on PWI NCAA Division III institutions in the Midwest.

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# Appendices

## Appendix A

Survey Email

**Email Message to Participants**

Dear [ First Name, Last Name],

You are receiving this correspondence because you are an Athletic Director at a National Association of Intercollegiate Athletics (NAIA) Historically Black College and University. I am requesting your participation in a brief three question survey. **Please complete the questionnaire, here:** https://www.surveymonkey.com/r/K6G5T67. The study consists of 1 informed consent question and three questions - with the third question requesting your permission to utilize your NAIA Return on Athletics data for this research.

I am a doctoral candidate in the College of Education at Morehead State University. I am conducting this research under the supervision of Dr. Fujuan Tan. Your participation in this study is completely voluntary and confidential. No personal information will be identifiable in any reporting. The IRB (Protocol Review Number: 22-06-102) of Morehead State University approved the implementation of this study. If you have any comments or questions, please contact my research supervisor, Dr. Fujuan Tan, Committee Chair at 606-783-2998 or email f.tan@moreheadstate.edu.

Sincerely,

Nathan M. Cochran
Doctoral Candidate
Morehead State University

## Appendix B

The Survey Questions

### Informed Consent Question (before the survey)

This research is being conducted by Nathan Cochran, a doctoral candidate in the Department of Foundational and Graduate Studies in Education at Morehead State University.

I am requesting your assistance with a research project I am conducting entitled "A quantitative investigation of athletic roster management impact on enrollment and retention at NAIA Historically Black Colleges and Universities." As a part of the doctoral inquiry, I am exploring the impact of athletic roster management on enrollment growth and retention at NAIA HBCUs.

You must be an Athletic Director at an NAIA member HBCU to participate in this study. The survey will consist of three questions. The survey responses will be stored on a secure computer, accessible only to the researcher. The computer is accessible by fingerprint only as an added security feature. You are not obligated to participate in this survey. At any time during this survey, you can elect to discontinue this process. As a participant in this inquiry, I will also be asking you to consent to allowing the use of your NAIA Return on Athletics data for the purpose of this research. While I hope you will allow me to use the data, you are not obligated to allow me access to the data.

If you decide to volunteer, please be sure to **PRINT YOUR NAME** to indicate your willingness to participate. This electronic signature will be our indication that you understand the purpose of the research study and that you are willing to help.

Participant Printed Name: _____

If you have any questions or concerns, you may contact the researcher:
Nathan Cochran
nc*******@moreheadstate.edu
217-***-****

The Office of Research and Sponsored Programs oversees research initiatives at Morehead State University. For questions or comments about this study, contact Janet L. Cline, Director of Research Integrity & Compliance, 901 Ginger Hall, 606-783-2541, jl.cline@moreheadstate.edu

## Athletic Roster Management Survey Questions

**(Link to participant survey: https://www.surveymonkey.com/r/K6G5T67)**

This study is about athletic roster management and its impact on enrollment and retention. Athletic roster management requires each sport to have specific yearly roster sizes to assist with institutional enrollment and retention goals. Example: Men's Basketball Roster size = 21 male student-athletes

1. Do you use athletic roster management?

2. If you answered yes to the question above, what academic year did you start using athletic roster management?

Example: 2017-16

3. For this study, do you permit Nathan Cochran to utilize your National Association of Intercollegiate Athletics (NAIA) Return on Athletics (ROA) data? By selecting "Yes," you allow the NAIA national office permission to share your NAIA ROA data with Nathan Cochran for this doctoral capstone research study at Morehead State University.

## Appendix C

NAIA ROA Data Request Email

Email: Requesting Data Permission

To: Alan Grosbach
Director of Return on Athletics
National Association of Intercollegiate Athletics

Good afternoon Alan,
I am currently working on my dissertation, and I wondered if you could help me with some specific data. My research focuses on Athletic Roster Management and the impact on enrollment and retention at NAIA Historically Black Colleges and Universities (HBCUs). I have access to the ROA data, but is there a way I can get comparison data for the 24 current HBCUs in the NAIA? I am looking for: student-athlete enrollment (2015-2020), Retention % (2015-2020), and net return per student (2015-2020). My research compares student-athlete enrollment to the overall enrollment (provided by IPEDS). I am doing the same with the retention percentage. I hope that there will be some significance in the data. I have attached an Excel spreadsheet specific to the data I am requesting. I hope you can assist me. In addition, if you have any thoughts on my research, I welcome those too.

Sincerely,

Nathan M. Cochran
Doctoral Candidate
Morehead State University

# Appendix D

NAIA ROA Data Request Spreadsheet

Tab 1

| UnitID | Institution Name | Reported Student-Athlete full-time equivalent (FTE) enrollment 2019-20 | Reported Student-Athlete full-time equivalent (FTE) enrollment 2018-19 | Reported Student-Athlete full-time equivalent (FTE) enrollment 2017-18 | Reported Student-Athlete full-time equivalent (FTE) enrollment 2016-17 | Reported Student-Athlete full-time equivalent (FTE) enrollment 2015-16 |
|---|---|---|---|---|---|---|
| 217624 | Allen University | | | | | |
| 158802 | Dillard University | | | | | |
| 133526 | Edward Waters College | | | | | |
| 220181 | Fisk University | | | | | |
| 133979 | Florida Memorial University | | | | | |
| 177551 | Harris-Stowe State University | | | | | |
| 225575 | Huston-Tillotson University | | | | | |
| 225885 | Jarvis Christian College | | | | | |
| 207209 | Langston University | | | | | |
| 218399 | Morris College | | | | | |
| 107600 | Philander Smith College | | | | | |
| 176318 | Rust College | | | | | |
| 160630 | Southern University at New Orleans | | | | | |
| 102270 | Stillman College | | | | | |
| 102298 | Talladega College | | | | | |
| 228884 | Texas College | | | | | |
| 176406 | Tougaloo College | | | | | |
| 243665 | University of the Virgin Islands | | | | | |
| 218919 | Voorhees College | | | | | |
| 206491 | Wilberforce University | | | | | |
| 229887 | Wiley College | | | | | |
| 160904 | Xavier University of Louisiana | | | | | |

Tab 2

| UnitID | Institution Name | Reported Student-Athlete Retention % 2019-20 | Reported Student-Athlete Retention % 2018-19 | Reported Student-Athlete Retention % 2017-18 | Reported Student-Athlete Retention % 2016-17 | Reported Student-Athlete Retention % 2015-16 |
|---|---|---|---|---|---|---|
| 217624 | Allen University | | | | | |
| 158802 | Dillard University | | | | | |
| 133526 | Edward Waters College | | | | | |
| 220181 | Fisk University | | | | | |
| 133979 | Florida Memorial University | | | | | |
| 177551 | Harris-Stowe State University | | | | | |
| 225575 | Huston-Tillotson University | | | | | |
| 225885 | Jarvis Christian College | | | | | |
| 207209 | Langston University | | | | | |
| 218399 | Morris College | | | | | |
| 107600 | Philander Smith College | | | | | |
| 176318 | Rust College | | | | | |
| 160630 | Southern University at New Orleans | | | | | |
| 102270 | Stillman College | | | | | |
| 102298 | Talladega College | | | | | |
| 228884 | Texas College | | | | | |
| 176406 | Tougaloo College | | | | | |
| 243665 | University of the Virgin Islands | | | | | |
| 218919 | Voorhees College | | | | | |
| 206491 | Wilberforce University | | | | | |
| 229887 | Wiley College | | | | | |
| 160904 | Xavier University of Louisiana | | | | | |

Tab 3

| UnitID | Institution Name | Reported Net Return per Student 2019-20 | Reported Net Return per Student 2018-19 | Reported Net Return per Student 2017-18 | Reported Net Return per Student 2016-17 | Reported Net Return per Student 2015-16 |
|---|---|---|---|---|---|---|
| 217624 | Allen University | | | | | |
| 158802 | Dillard University | | | | | |
| 133526 | Edward Waters College | | | | | |
| 220181 | Fisk University | | | | | |
| 133979 | Florida Memorial University | | | | | |
| 177551 | Harris-Stowe State University | | | | | |
| 225575 | Huston-Tillotson University | | | | | |
| 225885 | Jarvis Christian College | | | | | |
| 207209 | Langston University | | | | | |
| 218399 | Morris College | | | | | |
| 107600 | Philander Smith College | | | | | |
| 176318 | Rust College | | | | | |
| 160630 | Southern University at New Orleans | | | | | |
| 102270 | Stillman College | | | | | |
| 102298 | Talladega College | | | | | |
| 228884 | Texas College | | | | | |
| 176406 | Tougaloo College | | | | | |
| 243665 | University of the Virgin Islands | | | | | |
| 218919 | Voorhees College | | | | | |
| 206491 | Wilberforce University | | | | | |
| 229887 | Wiley College | | | | | |
| 160904 | Xavier University of Louisiana | | | | | |

# VITA

NATHAN M. COCHRAN

## EDUCATION

| | |
|---|---|
| May, 2000 | Bachelor of Science<br>South Carolina State University<br>Orangeburg, South Carolina |
| August, 2003 | Master of Arts<br>Webster University<br>St. Louis, Missouri |
| Pending | Doctor of Education<br>Morehead State University<br>Morehead, Kentucky |

## PROFESSIONAL EXPERIENCES

| | |
|---|---|
| 2023 | Vice President of Athletics and Athletic Director<br>Walsh University<br>North Canton, Ohio |
| 2021 | Executive Director of Athletics and Recreation<br>Xavier University of Louisiana<br>New Orleans, Louisiana |
| 2019 | Assistant Head Football Coach - Recruiting Coordinator<br>Kentucky State University<br>Frankfort, Kentucky |
| 2017 | Director of Athletics<br>Philander Smith College<br>Little Rock, Arkansas |
| 2016 | Assistant Athletic Director for Compliance<br>Paine College<br>Augusta, Georgia |

| | |
|---|---|
| 2015 | Head Men's and Women's Track and Cross County Coach<br>Paine College<br>Augusta, Georgia |
| 2014 | Assistant Football Coach – Offensive Coordinator<br>Paine College<br>Augusta, Georgia |
| 2013 | Assistant Football Coach – Offensive Coordinator<br>Alma College<br>Alma, Michigan |
| 2012 | Assistant Football Coach – Offensive Coordinator<br>North Park Univerity<br>Chicago, Illinois |
| 2011 | Kansas City Regional Admissions Recruiter<br>Missouri University of Science and Technology<br>Rolla, Missouri |
| 2011 | Assistant Football Coach (Volunteer)<br>Avila University<br>Kansas City, Missouri |
| 2009 | Head Football Coach<br>Lincoln University (MO)<br>Jefferson City, Missouri |
| 2006 | Assistant Head Football Coach – Offensive Coordinator<br>Blackburn College<br>Carlinville, Illinois |
| 2004 | Minority Admissions Recruiter - Assitant Football Coach<br>University of Wisconsin - Platteville<br>Platteville, Wisconsin |
| 2002 | Assistant Football Coach<br>Allen University<br>Columbia, South Carolina |
| 2000 | Math Teacher - Assistant Football Coach & Track Coach<br>J.L. Mann High School<br>Greenville, South Carolina |