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## A Comprehensive Study of the Learning Styles of Student Athletes and Academic Advisors at Three Institutions in the American Athletic Conferences and the Tools and Resources Used to Ensure Academic Success.

Dianna Lampitt  
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A COMPREHENSIVE STUDY OF THE LEARNING STYLES OF STUDENT ATHLETES  
AND ACADEMIC ADVISORS AT THREE INSTITUTIONS IN THE AMERICAN  
ATHLETIC CONFERENCE AND THE TOOLS AND RESOURCES USED TO ENSURE  
THE ACADEMIC SUCCESS OF STUDENT ATHLETES

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Education  
in the Department of Child, Family and Community Sciences  
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## ABSTRACT

Collegiate athletics plays an important role in higher education. As a result of this importance student athletes also play a significant role in higher education. However, due to their athletic responsibilities they face a number of challenges while enrolled in a college or university. An academic advisor for student athletes is responsible for not only helping the student athletes with their academics, they also play an important role in ensuring the eligibility of college student athletes so they are able to compete. As a result, academic advisors for student athletes use a number of tools and resources that help ensure the academic success of the student athletes.

This study examined the use of these tools and resources from three institutions in the American Athletic Conference by 14 participants and how they related to the Graduation Success Rate of each institution. In addition, this study highlighted and examined the learning styles of not only the student athlete but also the academic advisor using Kolb's Learning Style Inventory (LSI). The study was quantitative in nature using survey research to answer five research questions.

A Chi-Square analysis revealed there was significance between the number of tools and resources used and the Graduation Success Rate. A second Chi-Square revealed there was no significance between the student athletes learning style and the tools and resources used by academic advisors and learning specialists. The study also identified that of Kolb's four learning styles, the student athletes were mainly Accommodators and Divergers.

The results of this study suggest that academic advisors and learning specialists should use more tools and resources when working with student athletes to ensure a higher Graduation Success Rate. This study was one of the first to examine the tools and resources used by

academic advisors and learning specialist, as well as, the learning styles of student athletes.

Future research should continue to investigate the tools and resources used by academic advisors use and the role of the academic level of the student athlete.

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## LIST OF ABBREVIATIONS

AAC	American Athletic Conference
APR	Academic Progress Rate
FRG	Federal Graduation Rate
GSR	Graduation Success Rate
IAAUS	Intercollegiate Athletic Association of the United States
LSI	Learning Style Inventory
NCAA	National Collegiate Athletic Association
NCES	National Center for Educational Statistics

## CHAPTER ONE: INTRODUCTION

### General Background

Collegiate athletics plays a prominent role in higher education in this day and age especially with regards to the funding and notoriety it provides. However, according to Sharp and Sheilley (2008), due to this commercialization of college athletics, it is getting harder to reconcile the gap between the mission of higher education and college sports. Watt and Moore III (2001) supported this statement stating the relationship between higher education and athletics has always been turbulent. Unfortunately, while the relationship between the two has always been tenuous, it has also been rewarding for the institutions. Publicity from nationally televised sporting events has led to an increase in enrollment and notoriety for the institutions involved. In addition, college athletics are strongly supported by the college alumni, which leads to an increase in funding (Watt & Moore III, 2001).

Historically, collegiate athletics has been characterized by change. As early as the late 1800s, collegiate athletics was established in higher education firstly through crew, but was later dominated by men's football. Due to the aggressiveness of football and after a number of fatalities, Theodore Roosevelt called for change and a way to monitor college athletics to reduce fatalities and injuries. Roosevelt believed that something of this magnitude needed to be monitored and to have rules established to protect the institutions and student athletes. This call for change resulted in the establishment of the National Collegiate Athletic Association (NCAA) in the early 20<sup>th</sup> century, which became the governing body of intercollegiate athletics in the 21<sup>st</sup> century (Watt & Moore III, 2001). Through the 20<sup>th</sup> century and into the 21<sup>st</sup> century, the NCAA established a number of rules and regulations that provided a foundation for fair play within the different divisions. These rules and regulations not only protected the student athletes from over

commitment to their sport, but they also provided a level of success that needed to be met in order for students to still participate in their sport (Gayles, 2009; Jolly, 2008).

Over the last 20 years, there has been conflicting information about whether student athletes graduate at a higher level than their non-athlete student peers. Melendez (2007) stated that student athletes graduated at a higher rate than non-student athletes, female student athletes in particular. Gaston-Gayles (2004) however showed evidence that this graduation success is not true for all sub-populations of student athletes. In his 2004 research, Black basketball players graduated at a rate of 35 percent, while White basketball players graduated at 53 percent. In addition, Black football players graduated at 45 percent while their White counterparts graduated at 53 percent. This contradiction shows the inconsistency in information about the graduation rates of student athletes.

Higher education institutions measured their overall success using the Federal Graduation Rate (FGR). However, in 2003, the NCAA created the Graduation Success Rate (GSR), which is used to judge the success of a college student athlete (LaForge & Hodge, 2011). The FGR is “the percent of student athletes initially enrolled in fall of year “n” who graduated by fall of year “n+6”.” (LaForge & Hodge, 2011, p. 220) However, the GSR is an

alternate graduation-rate methodology developed by the NCAA that credits institutions for incoming transfers or mid-year enrollees who graduate, and does not penalize institutions for student athletes who leave prior to graduation if they are in good academic standing at the time of their departure. GSR is computed over the same six-year window as FGR (LaForge & Hodge, 2011, p 221-222).

Academic advising for student athlete success is measured by using the GSR as it takes into account those students that entered in the spring semester, as well as, transfer students. This



spring student athlete inclusion is significant as transfer students make up a considerable amount of student athletes. While the GSR is a different measure used to show the academic success of student athletes, there are still a number of challenges that student athletes face that their non-athlete peers do not understand. These challenges ultimately affect the academic success of student athletes. Academic advisors for student athletes use a number of tools and resources to assist student athletes with the challenges they face and to ensure their academic success.

### Challenges for student athletes

In order to understand if a student athlete will be successful academically, the student athlete culture needs to be closely examined. According to Despres, Brady and McGowan (2008), “the athletic culture can be broadly defined as that phenomenological environment in which college students who are athletes live and move when they are fulfilling their roles and responsibilities” (p. 200). Student athletes face numerous and different challenges than their non-athlete counterparts face. Melendez (2007) stated these challenges include, but are not limited to finances, loneliness, interpersonal struggles and autonomy. Sharp and Sheilly’s (2008) research added to this list with the following challenges: time demands, choice of major, stereotypes, isolation, identity conflict, academic motivation and the culture of the team. Essentially, student athletes have a tremendous amount of pressure placed on them as they enter and progress through college. The manner in which they cope with these challenges leads to possibilities for academic distress.

In addition to the challenges that student athletes face, academics, and in some cases lower academic levels of student athletes, become a focal point for researchers. This research specifically revealed that numerous student athletes struggle with their academics for a wide-range of reasons.

According to Levine, Etchison and Oppenheimer (2014), in some cases student athletes underperform due to a lack of motivation. However, in some situations student athletes have been admitted to universities and colleges with lower academic levels because of the potential glory they can provide on the athletic field (Winters & Gurney, 2012). Either way, upon entering their higher education studies, numerous student athletes immediately face an uphill battle regarding academic success, because they are not at the same academic level of other students. As a result of these issues of lower academic achievement and lower academic motivation, academic advisors play an important role in the life of a student athlete (Harmon, 2010). Due to the importance of academic advisors, it is essential to investigate and understand the tools and resources academic advisors for student athletes use to affect the success of their student athletes.

#### Academic Advisors for Student Athletes

Academic advisors for student athletes must fulfill a role that will support student athletes and help them cope with the challenges as well as ensure that the student athletes complete the necessary requirements of the NCAA. Academic advisors for student athletes need to understand what it means for a student to remain eligible with the NCAA.

To remain NCAA eligible, a student athlete must continue to make progress towards their degree at certain points of time when they are enrolled. Specific checkpoints and NCAA goals include:

1. Prior to third year enrollment, a student athlete must complete 40 percent of the designated degree and maintain a 1.9 GPA.
2. Prior to fourth year enrollment, a student athlete must complete 60 percent of the designated degree and maintain a 2.0 GPA.
3. Prior to fifth year enrollment, a student athlete must complete 80 percent of the

designated degree and maintain a 2.0 GPA (NCAA, 2016a).

In addition, student athletes need to pass six hours of course work a semester, 18 hours during the regular academic year (NCAA, 2016a).

However, there is more to understand as an academic advisor for student athletes than just the NCAA requirements. There is also the nature of their environment and the daily challenges they face. Harmon (2010) believed that in order for academic advisors to successfully assist student athletes, they need to be educated about the student athlete experience and understand the world in which the student athletes live. Essentially, what it means to be a student athlete and the struggles they face that the general population does not.

#### Statement of the Problem

While graduation rates of student athletes have been hotly contended, the fact remains that in most cases student athletes do not graduate in high numbers (Gaston-Gayles, 2004; Melendez, 2007). And although the student athlete population is small compared with the entire student population in higher education, it is still imperative for this student sub-population to be academically successful and graduate. Institutions who have academic advisors for student athletes need to develop a program or plan based on the students' academic risk assessment to prevent them from dropping out (Johnson, 2013).

More research is needed on the topic pertaining to which policies, tools and resources are used by those successful student athlete academic advising departments in order to provide a framework for other student athlete academic advisors. Furthermore, research regarding the relationship between the student athlete and the academic advisor needs to be performed to provide an understanding for academic advisors on how to successfully work with their student athletes. Some studies revealed that development theories such as Chickering (1969), Astin

(1999), and Kuh (2001) should be applied to student athletes (Despres, Brady & McGowan, 2008; Gayles, 2009; Gayles & Hu, 2009; Valentine & Taub, 1999). However, learning styles such as Kolb's Experiential Learning Theory can provide insight into how people pursue learning. Although debated in the literature, understanding one's learning style provides information, which can support informal and formal learning efforts.

This study examined the learning styles of academic advisors and learning specialists, as well as, the perceived learning styles of the student athletes with whom they work. There were three parts of the study. One part related directly to the academic background and experience of the academic advisor. The second part related directly to the tools and resources used by academic advisors for student athletes. The final part connected with the theoretical framework of the study, where the academic advisor's learning style and the perceived learning style of the student athlete were investigated.

The theoretical framework used for this study was Kolb's Experiential Learning Theory (ELT), which consists of three parts: the theory of experiential learning, the experiential learning model and the learning style inventory (Bergsteiner, Avery & Neumann, 2010). Data collected with regards to the theoretical framework was gathered via the Kolb Learning Style Inventory (LSI). The LSI was administered to the academic advisors and learning specialists through an online questionnaire. The sample gathered for the study was collected through a purposive sample.

Sternberg and Zhang (2000) stated that there are four learning styles that can be identified through Kolb's LSI; Diverging, Assimilating, Converging, and Accommodating which connects with a four stage learning cycle. This research described the learning styles of the student athletes as perceived by the academic advisors and learning specialists with whom they

work. The intended results of this study were to better inform the academic advising field which tools and resources are used, what learning styles are present among student athletes, and the background education and experiences shared by academic advisors for student athletes.

### Conceptual Framework

As previously mentioned, there are a number of different conceptual frameworks have been used to examine student athletes. However, for the purpose of this study David Kolb's (1984) Experiential Learning Theory (ELT) provided a more pertinent framework. According to Peterson, DeCato and Kolb (2015), the experiential learning theory can be used in a number of learning situations mainly to identify a holistic and recursive cycle of learning

According to Bergsteiner, Avery and Neumann (2010) Kolb's ELT model consists of three main components. One of the main components is Kolb's theory of experiential learning, which has four stages that make up a cycle. He believed that knowledge is created through a series of experiences, which can transform a learner (Kolb, 1984). The four stages of Kolb's theory are Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE) (Russell-Bowie, 2013). While there are four stages, they are typically referred to as stages of the cycle. According to Akella (2010), the learning cycle can be entered at any point and the student will follow the stages in sequence. In addition, Kolb (1984) stated that the students might not necessarily complete all four stages; however, they might spend most of their time within one or two stages in particular. He also added that learners usually progress through the cycle several times.

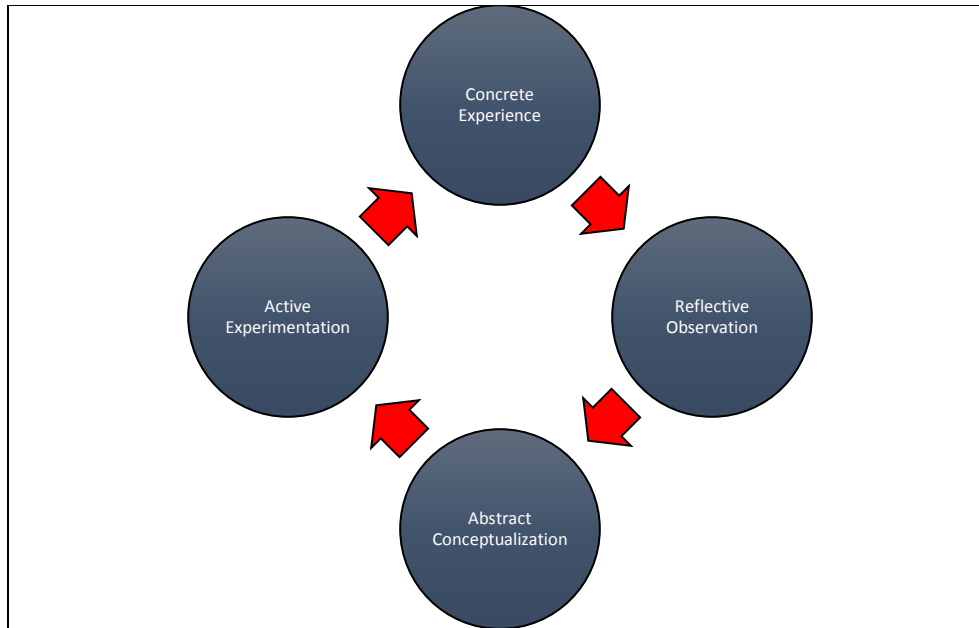


Figure 1: Kolb's Learning Cycle Model. (Kolb, 1985)

The second component of Kolb's ELT model is the Learning Style Inventory (LSI), which is used to assess an individual's learning style. The LSI instrument itself is a 12 item questionnaire that has been revised a number of times by Kolb. The first version was created in 1976 followed by a revised version in 1985, which addressed questions of reliability (Loo, 1999). There were two more updates in 1999 and 2005 with version 3.1. According to Kolb and Kolb (2005), the LSI is capable of revealing many different patterns, however the instrument identifies four different learning styles. The four styles are Diverging, Accommodating, Converging and Assimilating.

Numerous authors provided further insight on the LSI, which presents a clearer image of the Inventory. Akella (2010) stated that each of the four learning styles match each of the stages of the ELT. Gooden, Preziosi and Barnes (2009) provided a more detailed description in that Divergers are learners that generate a wide variety of ideas and like to gather information,

whereas Assimilators are learners that are able to understand information in a concise and logical form. They continued to state that Convergents are learners that take an active form of learning, understand concepts and pay attention to detail. Conversely, Accommodators are learners similar to Convergents and prefer to learn through active experimentation and are active in the learning process.

While Kolb's Experiential Learning Theory is popular, there have been a number of questions about the reliability and validity of the theory (Stumpf & Freedman, 1981). It is important to note that according to Bergsteiner and Avery (2014), experiential learning theories have received criticism regarding validity and usefulness. However, Manolis, Burns, Assudani and Chinta (2013) noted that Kolb's Experiential Learning Theory "is the most widely accepted learning style model and has received a substantial amount of empirical support." (p. 44) In addition, Garner (2000) also stated that the LSI received harsh criticism for its lack of theoretical strength. Although there have been a number of criticisms of Kolb's Experiential Learning Theory, there are still a large number of studies continuing to use the theory (Çakiroglu, 2014).

#### Significance of the Study

The student athlete population as a whole might be small compared to the rest of the student body, however, college athletics as a whole is influential in higher education. Numerous studies detailed the many challenges of student athletes, and their lower academic levels and motivation. Challenges such as time demands, isolation, and negative stereotypes all have an impact in different ways on the life of a student athlete (Gayles, 2009, Sedlacek & Adams-Gaston, 1992).

In addition, there are also numerous studies, which examine the NCAA rules and regulations and their impact on academic advising for student athletes. Johnson (2013),

emphasized the importance of the NCAA rules and regulations and how and why it is imperative for academic advisors to understand these regulations. Historically, the NCAA has played a large and significant role in college athletics (Watt & Moore III, 2001), effecting both coaches and academic advisors equally.

However, there is a gap in the literature with regard to the tools and resources of academic advisors for student athletes, as well as, the learning styles of student athletes. This study addressed these issues by analyzing three public institutions in the United States, which are part of the American Athletic Conference (AAC). One of institutions analyzed in this study has the highest Graduate Success Rate (GSR) for public institutions, which was 93 percent in 2014. The other two institutions posted GSRs of 83 percent and 79 percent. Results of this study might highlight the tools and resources that are essential for the academic success of student athletes. In addition, gaining a better understanding of the learning styles of student athletes could adjust the approach taken by academic advisors for student athletes.

#### Purpose Statement

The purpose of this study was to investigate and highlight the successful tools and resources used by academic advisors and learning specialists for student athletes in order to provide recommendations to increase student athlete academic success at other institutions. The primary goal was to explore the role of the academic advisor for student athletes, focusing on the tools and resources they use with their student athletes. In addition, the study examined the academic background and experiences of the academic advisors and learning specialists. This area is important because the literature has placed emphasis on the academic advisor or learning specialist understanding the challenges and experiences of the student athlete.



The secondary goal of this study was to explore the learning styles of the academic advisors and the learning specialists. The participants were asked to identify the perceived learning styles of the student athletes with whom they work. Once the study was completed, the intention was to create an outline and recommendations for other academic advisors for student athletes in the field to promote the success of student athletes.

### Research Questions

The following research questions proposed guided this study:

1. What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?
2. What are the perceived learning styles of student athletes identified by their academic advisors and learning specialists at three public research institutions in the Southeast of the United States of America?
3. What are the qualifications of academic advisors and learning specialists who work with student athletes at three public research institutions?
4. Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?
5. Is there a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the student's academic success?

### Definitions of Terms

The following terms are used throughout this study.

## Academic Advising

Advice given by an academic advisor to a student so that they are able to enroll in the necessary classes required for their major in order to graduate (Egan, 2015).

## Academic Advisor for Student Athletes

Academic advisor that provides academic information to student athletes in order for the student to enroll in classes required by the major in order to graduate. They provide information that pertains to the student maintaining NCAA eligibility (Johnson, 2013). In addition, they consult with university faculty and administration concerning athletic participation.

## Academic Progress Rate

Academic Progress Rate is a tool that was created by the NCAA as a way to monitor a student athlete's retention over a number of years. At the end of every academic year a student athlete is able to achieve four points. One point for good academic standing and one point if they continue at the institution at the end of fall and spring. The total for the team is then divided by the total possible points and then multiplied by one thousand. If a team falls below a .930 they face sanctions by the NCAA (Johnson, Wessel & Pierce, 2012).

## Academic Success

Within the context of this study, it is the ability for the student athlete to stay eligible according to the NCAA and their institution.

## Challenges

The problems and issues identified in the literature that a student athlete faces upon entering a higher education institution (Sharp & Sheilly, 2008).

## Learning Specialist

The role of a learning specialist is to support and develop a student athlete so they are able to achieve their best academic potential through numerous activities and strategies (University of Oklahoma, 2009).

## Stereotype

“A collection of trait-names upon which a large percentage of people agree as appropriate for describing some class of individuals” (MacKie, 1973, p. 432).

## Summary

Collegiate athletics plays an important role in higher education in the 21<sup>st</sup> century and it is important that we ensure the student athletes are succeeding academically and on the field. Academic advisors for student athletes play an important role in providing the necessary support for them to overcome the many challenges encountered and to graduate. It is essential to understand the learning styles of the student athlete, the academic background and experiences of the academic advisor and the tools and resources used by academic advisors for student athletes. Therefore, by understanding these components, recommendations to improve the academic success of student athletes may be developed.

## CHAPTER TWO: LITERATURE REVIEW

### Introduction

The purpose of this chapter is investigate the literature regarding the means by which student athletes are successful in higher education, while they are faced with a number of different challenges that non-athlete students do not experience. Success in this study, was measured by the Graduation Success Rate (GSR), which was introduced by the National Collegiate Athletic Association (NCAA) in 2003. The challenges that face student athletes was also examined, as they play a prominent role in the lack of academic success for student athletes resulting in lower levels of graduation. This study also explores the role of academic advisors with regards to the success of the student athlete and highlights a theoretical framework by which academic advisors can address the challenges student athletes face and prepare them to graduate.

In the 19<sup>th</sup> century, sports were introduced to higher education first in the form of crew followed, in the late 1880s by the rise of football (Watt & Moore III, 2001). It was not until the 20<sup>th</sup> century when a governing body was established to provide a framework for collegiate sports in the form of the NCAA. Historically, collegiate athletics has always been criticized due to the duality of roles in the students' experience. The dilemma is that they are both a student and an athlete. The difficulty is that separating the two roles is all but impossible. This study delved into the life of a student athlete and developed a plan for academic advisors to use to create an environment that facilitates an experience, which allows student athletes to develop holistically.

### History of Intercollegiate Athletics

In order to understand where we stand today with college athletics, it is important to review the historical timeline of how college athletics became what it is today: a profitable entity

and business within higher education. Collegiate athletes first started in the late nineteenth century with the team sport crew; however, crew was later surpassed in popularity in the 1880s by football (Watt & Moore III, 2001). Although still early in the history of college athletics, it was at this point that media coverage for college athletics first started and became a lucrative business for both the media and the colleges (Watt & Moore III, 2001). After a number of serious injuries and fatalities in college football, due to the aggressive nature of the sport, many institutions suspended their teams. As a result of this action, President Theodore Roosevelt demanded reforms for collegiate sport in the early 20<sup>th</sup> century (Zimbalist, 1999). In 1905, after a meeting convened by 13 institutions, new rules for football were created and the Intercollegiate Athletic Association of the United States (IAAUS) was created. Later the next year it officially became known as the NCAA, which was comprised of 62 member institutions (Smith, 2000).

According to Zimbalist (1999), at this point in its history, college athletics, especially football was set to grow and succeed. Due to this prime stage of readiness, between the years 1920 and 1940, forty large new sports stadiums were built in the U.S.A. to contain the growing spectator attendance numbers. However, due to this growth, three quarters of the 112 colleges in the NCAA in 1929 were in violation of the NCAA codes that were established. Zimbalist (1999) stated that a follow up survey found that not a single team had changed their practices to adhere to the NCAA codes. As a result of the lack of change in the athletics system, the University of Chicago dropped its football team. Robert Hutchins, the president of the University of Chicago at the time believed that college was an association of scholars and not an athletic association (Zimbalist, 1999). This is one of the first times we see dissatisfaction between athletics and academics. With the onset of the depression and World War II, college athletics struggled with a

decline in ticket sales and a scarcity of players. The nation's attention and young adults were involved elsewhere.

After the war, the NCAA tried to create an enforcement mechanism. In 1946, they convened a conference in Chicago where they produced a document that was known as the "sanity codes". This set of codes was used as a threat to expel any school that did not conform to the codes. The codes were the NCAA's attempt to bring order back to college athletics (Zimbalist, 1999). However, it wasn't until 1948 when the "sanity codes" were officially adopted by the NCAA and a change began to occur. According to Smith (2000), throughout the 1950s and 1960s the NCAA's capacity for enforcement increased annually, creating a stronger governing body.

In 1973 a different infrastructure began to emerge within the NCAA. The member institutions decided to create three divisions for institutions that would better reflect their competitive capacity (Smith, 2000). These groups were Divisions I through III, with Division I breaking down further into subdivisions I-A and I-AA; however, this subgrouping only occurred for football teams (Satterfield, 2015). In addition, with the introduction of the Education Act of 1972 and Title IX women's sports were slowly added in the 1970s and 1980s (Hughes, 2015).

Over the years, the association created rules and regulations to standardize sports especially when it came to the commercialization of intercollegiate athletics (Hosick & Sproull, 2012). However, since its establishment, the NCAA has grown exponentially and has faced a number of critiques. One criticism was that it had responded inadequately over the growing commercialism of college sports. The other was that it was criticized for "unfairly exercising its regulatory authority" (Smith, 2000, p. 16). While the NCAA has a number rules and regulations

that guide college athletics, in some cases they are criticized for taking their regulatory authority too far.

During the 1980s, economic hardship in higher education resulted in college presidents facing situations and choices. Many were pressured by influential boards of trustees and alumni members to add athletic programs to produce winning teams and increase the commercialization of their institution. However, they were also pressured by faculty and other educators to not add more sports and teams because they feared the increase in the commercialism of college sports would jeopardize higher education's academic values (Smith, 2000).

Overall, in the century since the establishment of the NCCA "the marriage between higher education and intercollegiate athletics has been turbulent" (Watt & Moore III, 2001, p. 8). Thelin (2011) also stated that college sports are today regarded as a national religion and that basketball arenas and football stadiums have become shrines to witness great entertainment. Such is the loyalty, passion and dedication of college sport constituencies.

### Student Success

According to National Center for Educational Statistics (NCES), in fall 2015 there were 20.2 million students who were expected to attend a college or university in the United States of America. This was an increase of 4.9 million students from 2000. In a recruiting report distributed by the NCAA (2014) in August 2014, there were 173,000 student athletes enrolled in 346 institutions in the United States of America. As illustrated in Figure 2, compared with the student population attending a college or university, the student athlete population is small. However, while a relatively small percentage, student athletes are public figures and their notoriety plays an important role when it comes to funding, in particular. Institutions receive

substantial amounts of money from televised games as well as participating in bowl games, conference playoff games, and extra season games (Tucker, 2004).

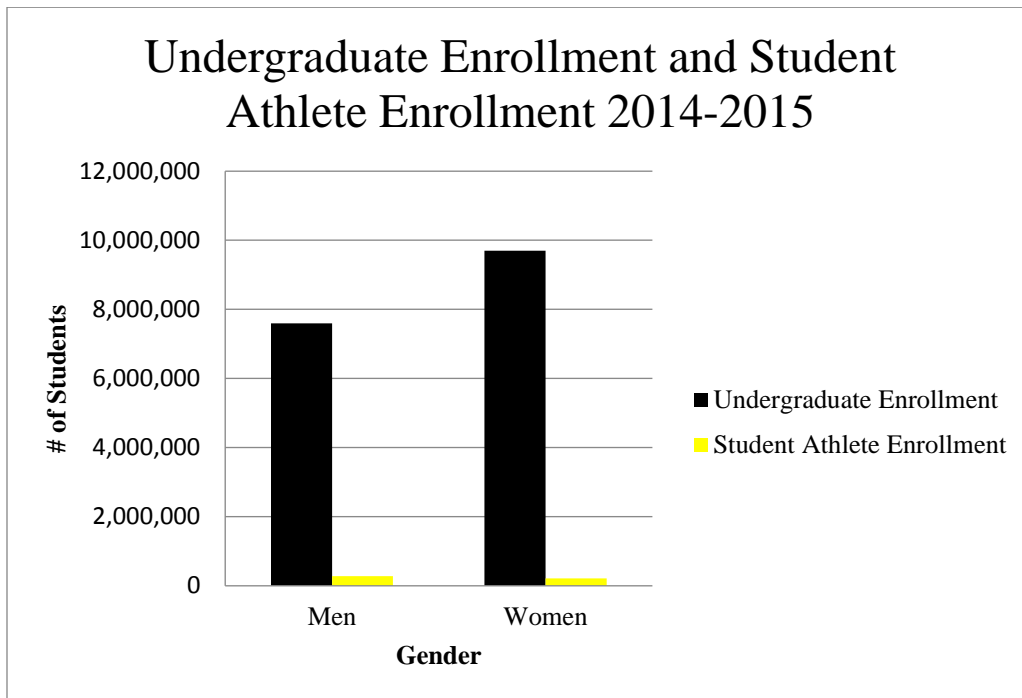


Figure 2: Undergraduate Enrollment and Student Athlete Enrollment 2014-2015 (NCAA, 2014; NCES, 2016)

### Student Athletes

Student athletes make up a small part of the higher education population however, they have more notoriety and public exposure than the average student. This situation is especially true of those student athletes that participate in revenue producing sports. With a one billion dollars a year business, college sports has become an increasingly complex business when taking into account the revenues and costs associated with it (Weaver, 2015).

Put in perspective in 2014, the first year of the college football playoff system, revenue generated was over 400 million dollars and it was distributed among 65 schools. Since then, each



of the power five conferences have launched their own television network generating five to ten million dollars a year in new revenue.

Weaver (2015) also discussed the indirect fiscal value of student athletes, stating that student athletes' efforts bring in millions of dollars in high value publicity to their institutions. However, many athletes are restricted in their daily activities due to their athletic responsibilities. While college athletics generates a lot of support there are a number of critics who believe that, currently, college athletics is corrupt and there is little to stop it. Furthermore, Sharp and Sheilley (2008) stated that reforms in the form of the Knights Commission reports and the Carnegie Foundation have tried and failed to stop the commercialization of college athletics which has become "edutainment". Sharp and Sheilley (2008), stated that "the increasing commercialization of college sports has made it even more difficult for universities to reconcile the gap between college sports and the fundamental mission of higher education" (p. 103). Simply put, these authors believed that college athletics is incompatible with higher education academic success.

As illustrated above, there has been a great debate over the last decade as to the place of athletics in higher education. According to Casement (2013), defenders of the current system argued that the entertainment value of college sports provides students with school spirit. Meanwhile, other experts noted that increasing commercialism of college sports has made it more difficult for educational institutions to reconcile the gap between the mission of higher education and the commercialism of college sport. Eitzen (2000) stated that student athletes in big time programs enter higher education at an academic disadvantage and often encounter a diluted academic experience, as coaches tend to diminish the academic side of being a student athlete. Research reveals that higher profile sports have student athletes that underperform academically (Gaston-Gayles, 2004). Additional research depicts that student athletes also

experience difficulties with developing self-understanding, outside of the realm of athletics (Watt & Moore III, 2001).

### Challenges for Student Athletes

Student athletes deal with different challenges in college than their non-athlete peers (Gayles, 2009; Hodes, James, Marin & Milliner, 2015; Sedlacek & Adams-Gaston, 1992). These challenges affect each student differently; however, they provide additional stress to all students who already have to balance all the responsibilities and expectations, which accompany the student athlete subculture.

The athletic subculture is often overlooked as a significant developmental force among participating students. The many demands student athletes experience are unique from other student sectors and include many diverse dimensions. “Potential influencing factors such as academic, psychosocial, and psycho-emotional adjustment to the challenges of college need to be examined in order to more fully comprehend the process of college student adjustment in athletes” (Melendez, 2010, p. 346). These many demands provide opportunities for development but also significant challenges across student athlete lives. This section discusses several of the challenges student athletes experience in the context of the athletic subculture.

### Time Demands

Time demands are one of the greatest challenges that student athletes face on a day-to-day basis and severely affect students’ academic performance (Comeaux & Harrison, 2011; Jolly, 2008; Menke, 2015). When a team is in season the student athletes are required to practice for 20 hours a week, which does not include competition (NCAA, 2008). Potuto and O’Hanlon (2006) added that nationally, 40 percent of student athletes reported spending ten hours a week playing their sport in addition to practice. In addition to these commitments, student athletes

often require treatment before and or after practice and competition. Treatment can be either to prevent or treat an injury and can last several hours (Sharp & Sheilley, 2008). Jolly (2008) stated that these regimented schedules can take their toll and student athletes, especially freshman, are stressed and in some cases suffer from depression. Melendez (2007) reinforced these statements stating that increased demands on the student athletes' time such as practice and study hall are negative influences to the student's academic success.

Sharp and Sheilley (2008), stated that the time demands of college athletics have often had a negative effect on the student athletes academics. Citing a study by Maloney and McCormick (1992), Sharp and Sheilley stated that there is a drop in GPA of student athletes when they are in season. They continued to say that there is also the factor of fatigue; the student athlete often neglects academic pursuits after a strenuous day of practice and competition. Additionally, Etzel, Watson, Visek and Maniar (2006) stated that most coaches today prescribe to the "more is better" school of thinking and when combined with the other areas of stress frequently lead to many student athletes becoming "over-trained". Furthermore, over-training leads to undesirable academic and health outcomes.

Figures 3 through Figure 5 clearly depict the time commitments of student athletes, a general student working, and a general student that does not work. The sections of the pie charts are broken down by the activities of each student. These activities are the general pursuits of that type of student and do not include leadership positions in clubs and organizations or other extracurricular activities. The images clearly show the lack of remaining time to dedicate to other pursuits for the student athlete when compared with the general student whether they are working or not.

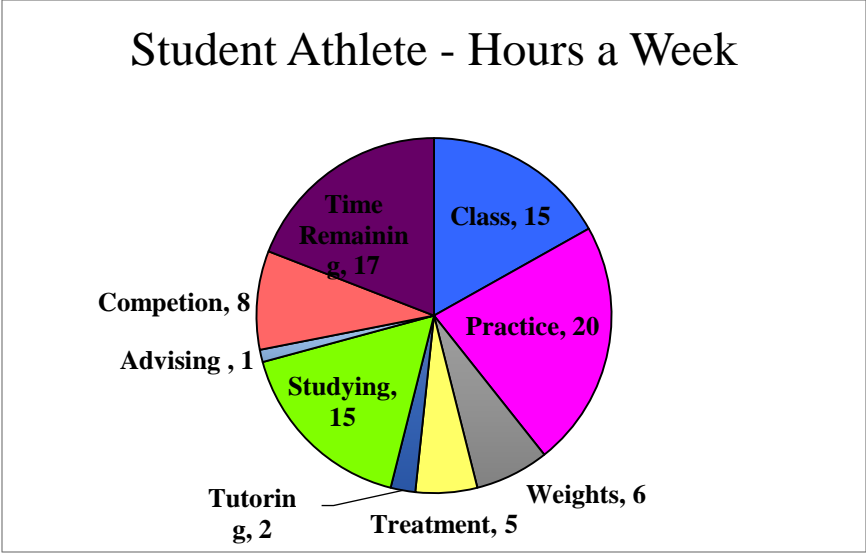


Figure 3: Student Athlete Hours a Week Broken Down by Activity

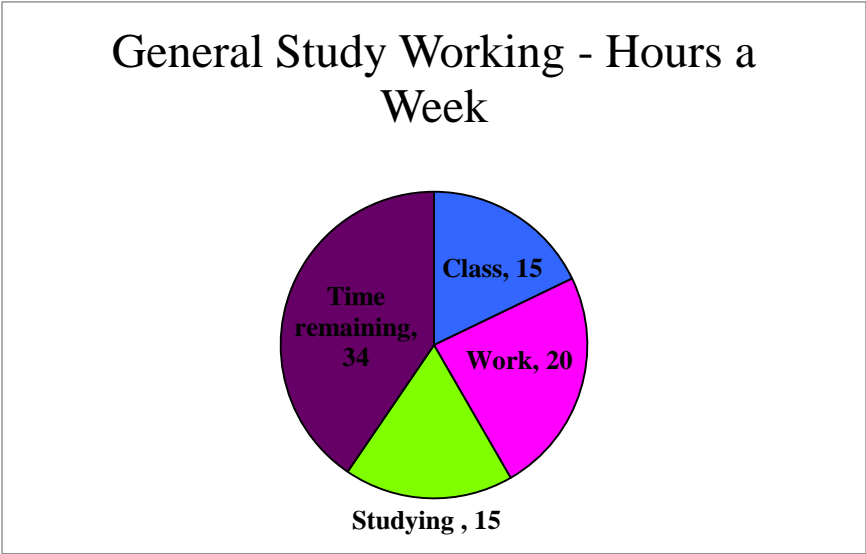


Figure 4: General Student Working Hours a Week Broken Down by Activity

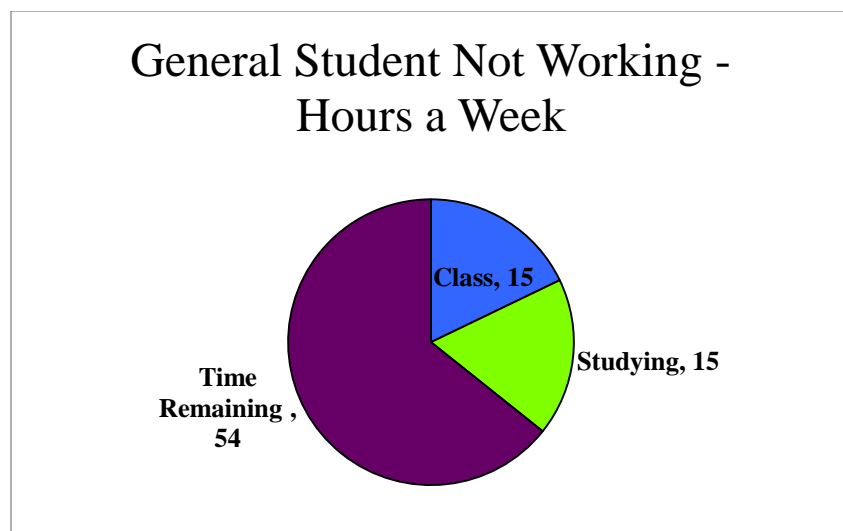


Figure 5: General Student Not Working Hours a Week Broken Down by Activity

### Negative Stereotypes

While student athletes are applauded for their performance on the field, this praise is not often the case in their academic roles. Students and faculty often have a negative perception of student athletes as over privileged and academically unmotivated (Comeaux & Harrison, 2011; Harmon, 2010; Jolly, 2008; Levine, Etchison & Oppenheimer, 2014). Potuto and O’Hanlon (2006) stated that many student athletes believed they were treated differently because of their participation in college athletics. In some cases, this treatment was negative and in others positive. In a study conducted by Simons, Bosworth, Fujita and Jensen (2006), 33 percent of the student athletes studied reported a negative experience with a faculty member while 15 percent reported positive experiences. In addition, 62 percent reported a faculty member made a negative comment about student athletes in class. Jolly (2008) reported that some professors are resistant to help student athletes reschedule exams and assignments despite the fact that the institution requires it. Frequently referred to as a “dumb jock”, athletes often struggle with the negative

perception of their academic ability (Bimper, Harrison & Clark, 2013). Sharp and Sheilley's (2008) research further illustrated these issues when discussing that student athletes referred to as "dumb jocks" often disengage from their academic obligations. Part of this exposure includes student athletes beginning to behave and embrace the derogatory stereotype that they are in fact not good enough academically.

### Isolation

One of the side effects of the time commitments placed on student athletes is that they often report feelings of isolation and as a result fail to fully form their identities. A student athlete has two identities, one as a student and one as an athlete and due to their time commitments, they fail to fully form both. In their classes according to Jolly, (2008) student athletes tend to segregate themselves and not engage in class discussions. Jolly continued to state "approximately 43% of student-athletes say that they discuss ideas from their readings or classes with others outside of class "not much of the time or less often'"(p. 147). As a result, student athletes do not fully develop their identity as a student, which leads to a conflict in their identity. However, it is also interesting to note that according to Aries, McCarthy, Salovey and Banaji (2004), student athletes at highly selective colleges were not isolated from the rest of the student body, did not suffer developmentally, and overall showed higher levels of well-being. It is important to note that the student athletes mentioned in the study by Aries et al. are from highly selective universities and do not have the same experiences as the average student who will usually tend to struggle academically.

### Identity Conflict

Student athletes in higher education have a dualistic role that their non-athlete peers do not experience and these roles are influenced by their surroundings. Melendez (2007) stated that

a strong sense of athletic identity can have both positive and negative effects on the student athlete. According to Watt and Moore III (2001) student athletes develop identities as both a student and as an athlete, and focusing on one identity more than the other could be detrimental to the student's success. Evidence shows that student athletes that identify more as an athlete than a student generally look to continue to play their sport on a professional level (Linnemeyer & Brown, 2010). However, only two percent of college student athletes will qualify and succeed as a professional in their sport (Sandstedt, Cox, Martens, Ward, Webber, & Ivey, 2004). This fact results in 98 percent of students being unprepared for a non-sport career (Menke, 2015). In addition, student athletes that develop a strong athletic identity link the performance in their sport with their self-esteem (Melendez, 2007). This may result in a positive consequence when the student is excelling at his or her sport, and the student athlete generally reports a high self-esteem, and it may spread positively into other areas of their lives. With that said; however, there is still an overall negative perception of a strong athletic identity, as the negative consequences often out weight the positives.

### Academics

As college athletics continues to grow and expand financially, the further it moves away from the mission of higher education as a whole. Sharp and Sheilley (2008), stated that “the increasing commercialization of college sports has made it even more difficult for universities to reconcile the gap between college sports and the fundamental mission of higher education” (p. 103). Simply stated, the authors believed that elite college athletic programs, those programs represented in institutions included in the top performing athletic Division 1 conferences, are incompatible with education. The mission of higher education institutions is to educate its

students; however, among student athletes that mission often becomes blurred, as they tend to identify as an athlete rather than a scholar.

For some student athletes, their academic underperformance is a result of a lack of motivation (Levine, Etchison & Oppenheimer, 2014). However, research presents a critical reason for this trend: student athletes are not as prepared for college academically. When an institution creates a policy to accept students who do not meet the institutional academic requirements, they often focus on what they call “other attributes”. In most cases, this situation frequently means students who are athletically gifted will be accepted despite their insufficient academic qualifications. The down side of this decision is that student athletes are under-prepared for the rigor of higher education. This practice of focusing on non-academic criteria for admission is referred to in a compelling statement by Winters and Gurney (2012), “potential glory of a university on the athletic field can become a key consideration in the decision whether to admit certain applicants” (p. 3). This concern results in pressure on the admission committee to accept the talented students and not allow them to attend competing institutions. It also results in a number of students that cannot compete in the classroom.

### Lower Academic Levels

Historically, the NCAA has established rules and regulations that students are required to meet in order to enter college as early as 1965 and these rules have changed over time to accommodate a change in education. Essentially, students with low SAT/ACT scores still qualify if they have a high GPA in high school that is on a sliding scale. As a result, admission decisions of student athletes are far more complex than that of their non-athlete peers. Ultimately the student has to be a good “fit” for the institution (Winters & Gurney, 2012). However, this



decision of the student athlete being a good fit for the institution raises the question as to whether the school is a good academic “fit” for the student athlete.

In studies to examine if student athletes are academically prepared for college, it is common place for ACT and SAT scores to be used when studying student athletes; however, many researchers discuss how these predictors do not adequately measure academic achievement (Gaston-Gayles, 2004; Sedlacek & Adams-Gaston, Winters & Gurney, 2012). For instance, standardized testing and inflated high school GPAs make it hard for admissions committees to decide whether a student athlete will perform academically. Winters and Gurney, (2012) found that the NCAA’s sliding scale of high school GPA is flawed and these flaws are “exacerbated by the context of intercollegiate athletics” (p. 7). The authors also found that there was no difference between a student athlete’s high school GPA and the GPA of a regular student, which speaks against inflated GPAs.

However, Winters and Gurney’s (2012) research revealed that there is a significant difference between SAT scores and basic academic skills. Even though the student athletes recorded high GPAs, they still recorded deficiencies in basic reading and writing. The authors believed that this could be because of cultural differences, socio economic factors, as well as, linguistic matters. They also stated that the impact of preparing for standardized testing could increase the test results, which raises the question as to whether SATs are a reliable tool to use to predict academic skill. The fact remains, the students’ lower skill levels result in negative experiences in the classroom, which have further reaching consequences (Winters & Gurney, 2012).

In addition, student minorities tend to struggle more with academics in college due to the fact that they are members of an underprepared group. Gaston-Gayles (2004), stated that

“because minority students typically enter college with less academic preparation, the added problems in the academic domain of the college environment exacerbates the negative impact on academic motivation for these students (p. 81).

However, it is important to point out that student athletes do not sustain lower academic performance at all institutions. For academically selective institutions such as Notre Dame, Duke, and Stanford, student athletes tend to graduate at higher rates than at other higher education institutions (Ferris, Finster & McDonald, 2004). Essentially, admissions policies that are more selective and tougher admit student athletes that are capable of transitioning from high school to college, successfully. However, when those admission standards are not enforced for student athlete applicants, their academic success is much less likely and in severe cases student athletes drop out.

#### Choice of Major

Once admitted, all student athletes have to select a major in order to graduate. However, the research clearly indicated that the selection of a major causes more problems for, in some cases, an already underprepared student athlete as they are unable to pass complex science and math classes. Harmon (2010) stated that student athletes may be “less able to formulate mature educational and career plans than their non-athlete peers” (p 27). In addition, the NCAA Academic Progress Rate (APR) is believed to force some student athletes to choose programs and degrees that are considered “easy” (Sharp & Sheilley, 2008). As a result, a trend exists where student athletes are now being placed in the “easiest major” coupled with the fact that in some cases these degree programs are considered distance learning (meaning that the athlete need not attend class as all the work is done via the internet). This trend results in a whole host of issues (Sharp & Sheilley, 2008). Harmon (2010) supported this finding stating “courses are often

chosen to fit busy schedules and not to support interests or even challenge and support academic ability” (p. 27). As a result, student athletes often study majors that they have no interest in and struggle to stay engaged in the coursework.

### Theoretical Framework

It is not uncommon for researchers in collegiate athletics to assign, Alexander Astin, George Kuh, and Arthur Chickering’s theories to research regarding the development of student athletes. Gayles (2009) stated that Astin’s (1999) theory of student involvement can be related to student athletes because when students are involved they learn and in the case of student athletes they are involved in their sport. This same thought can be applied to Kuh’s (2001) student engagement theory. However, possibly the theories applied most frequently to student athlete has been Chickering (1969) and later Chickering and Reisser’s (1993) psychosocial development model (Despres, Brady & McGowan, 2008; Gayles, 2009; Gayles & Hu, 2009; Valentine & Taub, 1999).

### Chickering and Reisser’s Student Development Model

Valentine and Taub (1999) described in great detail the details of Chickering and Reisser’s development model, first outlining the seven vectors and their meaning. They then apply each vector to student athletes stating that the first four vectors occur during the first two years of college while the last two occur during the last two years of college. In addition, Valentine and Taub (1999) explained how to use the theory as an academic advisor to ensure the development of the student. In order to understand how Chickering and Reisser can be applied to the development of student athletes, we need to further analyze the seven vectors and how they apply to student athletes. The seven vectors are (1) developing competence, (2) managing emotions, (3) moving through autonomy toward interdependence, (4) developing mature

interpersonal relationships, (5) establishing identity, (6) developing purpose, and (7) developing integrity (Despres, McGown & Brady, 2008).

The first vector, developing competence, was broken into three parts by Chickering and Reisser (1993), which were intellectual competence, physical and manual skills, and finally interpersonal competence (Evans, Forney, Guido, Patton & Renn, 2010). During this stage, Valentine and Taub (1999) recommended that academic advisors help student athletes overcome the negative stereotype of a "dumb jock". In addition, student athletes have significant time demands and conflicts between their athletic and academic world and struggle to deal with both at the same time. Valentine and Taub (1999) suggested that academic advisors, or counselors, should encourage student athletes through these challenges especially those that restrict their academic pursuits. In addition, advisors should also encourage student athletes to develop personal friendships to help with the development of interpersonal competence (Valentine & Taub, 1999).

The second vector of Chickering and Reisser's model is managing emotions where student athletes develop an ability to recognize and accept their emotions. In addition, they learn to appropriately express these emotions and control them (Evans, Forney, Guido, Patton & Renn, 2010). With the stress that student athletes experience, due to their time constraints and academic demands, student athletes frequently struggle to manage and control their emotions (Valentine & Taub, 1999). Some of the emotions that student athletes feel relate to their performance on the field, and usually manifest in the form of rage, frustration and fear (Valentine & Taub, 1999). Helping the student athletes to understand the reasons for these emotions and encourage sharing these emotions with teammates, advisors can help student athletes work through these problems (Valentine & Taub, 1999). Also, providing individual counseling helps students understand why

they experience these emotions. These tools can help prevent student athletes from suffering emotional crises (Depres, McGown & Brady, 2008).

The third and fourth vectors are moving through autonomy towards interdependence and developing mature personal relationships. During the first vector mentioned, the student develops independence, which also includes self-direction (Evans, Forney, Guido, Patton & Renn, 2010). The second of the two vectors sees the growth of the student where they develop intercultural and interpersonal tolerance and they learn to accept difference as they develop relationships. Athletes particularly struggle to establish autonomy as they have spent much of their life being coached on what to do on the court or field and the coach's authority is absolute (Valentine & Taub, 1999). The authors continued to state that helping students through these stages, advisors need to approach this from three different directions where they develop their own approach but, ultimately, answer the question of does the approach foster autonomy. The second direction is that advisors need to understand the difference in the learned patterns of an authoritarian approach and that students may respond differently to an advisor approach. The last direction is to encourage students to self-explore and move towards a system of independent thought (Valentine & Taub, 1999). The fourth vector is one where student athletes struggle with the great deal of time they spend with their teammates and other student athletes. However, it is recommended for advisors to encourage student athletes to develop relationships in different areas of their lives such as through their classes (Depres, McGown & Brady, 2008).

The last three vectors are developing identity, purpose and integrity. Developing identity essentially builds on the vectors that come before it (Evans, Forney, Guido, Patton & Renn, 2010). It also includes developing a level of conflict and understanding or comfort with your body and appearance, as well as, your gender and sexual orientation. For advisors and

counselors, it is important to understand that during this stage student athletes might be prone to steroid abuse and they need to understand the resources available to help the students work through these problems (Depres, McGown & Brady, 2008).

Developing purpose is the stage where students start to develop clear vocational goals and start to make meaningful commitments to these goals (Evans, Forney, Guido, Patton & Renn, 2010). Some problems often sensed during this time is that students have had to make academic sacrifices due to their sport and are unable to explore as many career options as their non-athlete counterparts (Valentine & Taub, 1999). Advisors can encourage students to attend career fairs early during their college enrollment so they can develop ideas of what careers they would like to pursue. Advisors can also collect information from these fairs and have it available for athletes when they come to choose their major and, in doing so, student athletes are able to make more informed decisions (Valentine & Taub, 1999). While this theory applies to the overall development of the student athlete for the purposes of this study, Kolb's experiential learning theory will be applied because it is linked more closely to the strategies employed to cultivate academic success among student athletes.

#### NCAA CHAMPS/Life Skills Program

In addition, the NCAA CHAMPS/Life Skills Program can be used as a framework for practice. Both Kolb's theory and the CHAMPS program are discussed below. A number of researchers have used the NCAA CHAMPS Life Skills Program as an approach to develop the holistic student in higher education (Carodine, Almond & Gratto, 2001; Harmon, 2010). The CHAMPS Life Skills Program was developed by the NCAA in 1991 as a way to help student athletes succeed. CHAMPS stands for Challenging Athletes Minds for Personal Success and its mission is "to provide services and support to the membership, public and media to develop and

enhance the life of the student-athlete through educational programs and resources focusing on gender equity, student-athlete welfare, and life skills” (NCAA, 1999, p. 3). While the program addresses important topics such as the educational and intellectual development of student athletes and helping student athletes develop self-esteem, it is not a development model so should not be applied to student athletes in that sense. However, it is a framework for practice and provides vital information to understand how advising athletes and supporting their development occurs in higher education today.

### Kolb’s Experiential Learning Theory

David Kolb developed his experiential learning theory in 1984 and he is one of the leading theorists in this area being cited over 17,000 times (Schenck & Cruickshank, 2015). According to Bergsteiner, Avery and Neumann (2010), Kolb’s approach consists of three components; namely, the theory of experiential learning, the experiential learning model, and the Learning Style Inventory (LSI). Kolb (1984) believed that the “process by which knowledge is created through the transformation of experience, knowledge results from the combination of grasping and transforming experience” (p. 41). Russell-Bowie (2013) described Kolb’s experiential learning theory (KELT) as a four stage cycle that includes the following stages; Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE). They continued to state that learning in this cycle can occur at any point in time, however most of the time learning follows the four stages. Kamis and Kahn (2009), stated that an individual movement between the four stages emphasizes the learning process.

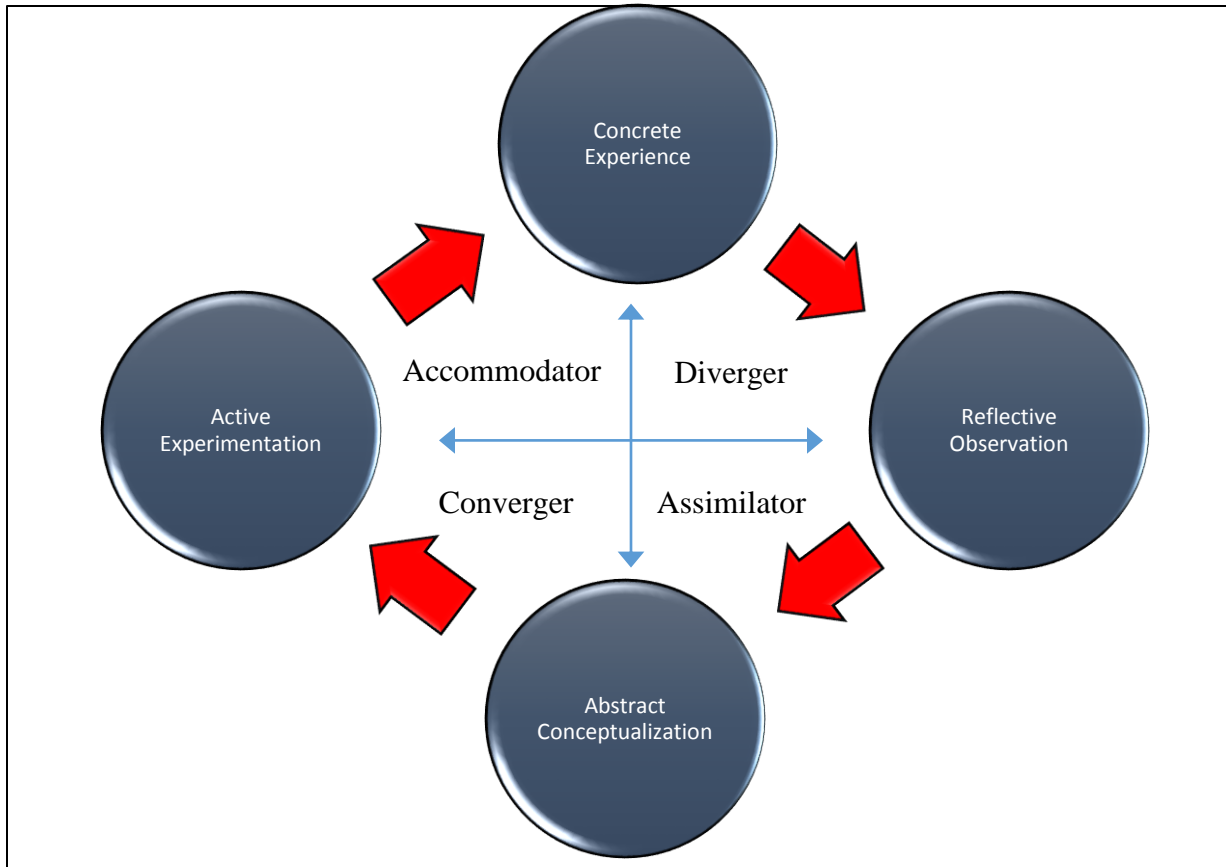


Figure 6: Kolb's Learning Cycle Model (Kolb, 1985)

Stage One of KELT, Concrete Experience, is the stage where learners are actively involved and are learning through the experience (Russell-Bowie, 2013). In the case of student athletes, this stage would be applied to the sport they participate in daily. These experiences provide the foundation for learning. In Stage Two of KELT, learners “reflect back on their experiences in the previous stage and articulate what learning processes they went through, how and what they have learned, observing and examining their experiences from all perspectives” (Russell-Bowie, 2013, p. 49).

Stage Three, as described by Akella (2010), occurs when students reflect on their observations and used logic to develop ideas instead of feelings to deal with a situation or



problem. The fourth and final stage is Active Experimentation and it occurs when students test the theories of Stage Three to make predictions and then used those predictions to make decisions (Akella, 2010). Kolb (1984) argued that a student might not experience every stage, however, they usually spend time on one or two stages. Based on this background, student athletes might not necessarily complete all four stages but would predominately spend time in Stages One and Two as these are where their strengths lie. It would be the role of the academic advisor to facilitate opportunities for students to create a bridge between what students learn as athletes and their academic environment, building upon already established strengths.

In addition to Kolb's learning cycle there are also four learning styles that link directly to the cycle; Diverger, Assimilator, Converger and Accommodator. However, learning cycles and styles connect according to Çakiroglu (2014), Divergers learn best through Reflective Observation and Concrete Experiences as they have a strong imaginative ability. They also tend to be people-oriented and react with emotion rather than logic. According to Manochehr (2006) Divergers learn best through feeling and watching, which is different from the other four styles. Assimilators however, are more closely linked to Abstract Conceptualization and Reflective Observation (Manochehr, 2006). Furthermore, Assimilators tend to concentrate more on logical validity of theories instead of focusing on how they can be applied. Unlike Divergers, Assimilators learn through thinking and watching (Manochehr, 2006). The third learning style, Convergents, are more closely associated with Abstract Conceptualization and Active Experimentation. These learners succeed with the practical application of theories by solving problems and making decisions. Similar to Assimilators, Convergents learn best through thinking and doing (Manochehr, 2006). Çakiroglu (2014) stated that the final learning style, Accommodators, learn best through Concrete Experimentation as well as doing and feeling

(Manochehr, 2006). They frequently study examples and are more likely to be observers than activists. Table 1. summarizes this information making it easier to understand.

Table 1: Kolb’s Learning Styles and Conditions (Manochehr, 2006)

<b>Learning Style</b>	<b>They learn best through</b>
<b>Diverger</b>	Feeling and watching
<b>Assimilator</b>	Thinking and watching
<b>Converger</b>	Thinking and doing
<b>Accommodator</b>	Feeling and doing

While Kolb’s theory is vastly used in literature report learning style inventories and the theory of experiential learning, there are still a number of critiques. Mainly, there are issues with the validity and reliability of the Learning Style Inventory (LSI) scores. Stumpf and Freedman (1981) believed that the LSI is unstable and generates large unexplained variances, which results in misleading information and limit its validity. Although Kolb modified the LSI, researchers stated that there are still issues with validity and reliability (Bergsteiner, Avery & Neumann, 2010). Price (2004) stated that there are some inconsistencies between the student self-reported study processes and the students actual study processes. However, such inconsistencies are not unusual in self-reporting tools. While there have been a number of updates to the LSI there is still a question of its construct validity and its scoring methods (Bergsteiner et al., 2010).

In addition to the LSI, there have been a number of issues with Kolb’s theory. Bergsteiner et al. stated that “Kolb prevaricates as to whether his model represents four learning

styles or four learning stages” (p. 31). The problem with the confusion between learning styles and stages is learning styles usually relate to unique personality traits whereas learning stages link to the step taken in a learning cycle (Bergsteiner et al., 2010). Moreover, with regard to the conceptualization of the learning model, some scholars claim there are flaws. One such flaw is what constitutes abstract learning and concrete learning, is highly confusing and could be the reason for the lack of integration in the field (Bergsteiner et al., 2010). Although there are a number of critiques of Kolb’s theory, it is still important to note that it is widely used throughout the adult learning field.

According to Schellhase (2008), Kolb “believed that a person’s learning style results from an interaction between an individual’s internal characteristics and their external environment” (p. 19). The author continued to state that Kolb proposed that there were two different components of learning. One component would be acquiring experience and the other would be transforming experience to knowledge. In the case of student athletes, their experiences, due to the commitment to participating in their sport, are different from other college study populations resulting in their challenges and environment being different also.

According to Valentine and Taub (1999), student athletes experience an environment where they are constantly coached and that the coaches’ authority is absolute. In addition, the authors stated that this immediate oversight and heavily directed environment is cultivated over the span of the student athlete’s competitive career (Valentine & Taub, 1999). In the case of connecting Kolb’s theory to student athletes, the environment from which student athletes learn is that of a coached environment where they obey the authority figure. In the academic environment, the authority figure for the student athlete could be faculty or the academic advisor assigned to that the student athlete. However, few faculty and advisors interact in such an

authoritative manner with the average students. The next section explores the roles and strategies college academic advisors employ.

### Academic Advisors

Academic advising plays an important role in higher education (Burt, Young-Jones, Yadon & Carr, 2013). White (2015) stated that the “purposes of academic advising accommodate all students so that they can make reasoned decisions as they set and enact the goals of their lives” (p. 263). While the student’s ability to make reasoned decisions might be a simplistic view of academic advising, the importance of academic advising cannot be overstated. Egan (2015) provided a more comprehensive perspective of the importance of academic advising when he stated that academic advisors play an integral role in guiding the students through the requirements of general education as well as preparing them to navigate the universities’ curricular system.

According to Lowenstein (2015), students are unprepared during their K-12 years to understand and navigate the curriculum of a college or university. His statements reiterated the importance of academic advisors. However, the fact remains that in order for students to understand the postsecondary institution’s landscape, academic advisors need to be “intentional interaction designers to create the experiences which contribute to the future of our students” (Shockley-Zalabak, 2012, p. 13). That is, academic advisors need be intentional when advising students in order to create the necessary environment for future success.

### Academic Advising for Student Athletes

Advising student athletes is an even more complicated process, than advising the general student body because these students must report to several advisors or counselors. However, most, but not all, Division I schools have an academic advising office within or closely

associated to the institution's athletic department. While there are many higher education institutions that provide acceptable facilities for student athletes, there are still a vast majority of institutions that are unable to provide or afford these facilities. In addition to inadequate facilities, most schools do not have the trained personnel to understand the National Collegiate Athletic Association (NCAA) rules and regulations. This situation creates further roadblocks for academic success of student athletes. As a result, athletes are referred to major specific on-campus advisors who unfortunately "have limited, if any, direct knowledge of these challenges" (Jolly, 2008, p. 146).

For those institutions that are able to afford facilities and staffing to support student athletes, it is imperative that the academic advisors are mindful of the student athlete's stressful environment. In some institutions, academic advisors merely monitor their student athletes so they maintain eligibility by meeting the expectations required by the NCAA. Other institutions have more complex processes to ensure the academic success of student athletes (Comeaux & Harrison, 2011). Harmon (2010) provided critical guidance regarding the first step in supporting student athletes;

to commit to being allies of student athletes by being accurately informed and critical in the information...we need to tell them we support them and then act in ways to demonstrate our knowledge of their experience and genuine interest in helping them success. (p. 29)

This concept is also supported by Sedlack and Adams-Gaston (1992) when they stated that a useful area of study for academic advisors and counselors would be to understand the world of the student athlete.

Academic advisors might use different processes to help students understand their

academic studies. Morrell (2002) discussed the use of popular culture as a framework for illustrating or understanding certain information, which allows student athletes to develop a group of specific information. Morrell (2002) believed that popular culture provides the students with a connection between lived experiences and what they are learning. Students are able to draw from common experiences that they have seen or experienced and draw parallels to their school work. By utilizing this strategy students are better able to understand what is required of their academics. It also helps motivate students to continue with their studies where some might give up. Moreover, Morrell's (2002) strategy, when used appropriately, can help a student athlete develop critical thinking and analytical skills.

However, Comeaux and Harrison (2011) believed that "student-athletes' academic success will be based primarily on a set of individual characteristics and dispositions, with effects from the social and academic systems within which the student-athlete operates" (p. 237). They believed there are four broad areas that influence the success of a student athlete, which are precollege characteristics, initial commitments, social systems and commitments (Comeaux & Harrison, 2011). These four areas can be further broken down to reveal that faculty, peers and teammates also directly relate to the success of a student athlete. It is important to understand these four areas and how they relate to the success of the student athlete.

A study done by Hodes, James, Martin and Milliner (2015), at West Chester University, a Division II institution, followed a multilayer approach to academic support, which included multiple entities and types of support. The findings showed that the support student athletes receive comes from a number of different entities. The first form of support is the faculty and, second from the academic resource center, which has an early warning system. The third form of support comes from the counseling and advising services provided by the institution. In addition,

a coordinator from the academic support services office is also responsible for planning and implementing an academic program to help student athletes. Essentially, this multilayer support has resulted in three keys to the success of the program at West Chester University. The first is keeping the student athletes welfare at the forefront of the conversation, the second is to find mutually beneficial outcomes, and the last is making sure that the services are not duplicated by keeping them in separate areas (Hodes et al. 2015).

While a number of researchers have developed strategies to support student athletes academically, there is a gap in the research about the qualifications needed to fulfill the role of an academic advisor for student athletes. Research showed this role is important for the success of student athletes; however, the education level and experience needed to successfully fulfill the role of an academic advisor is not documented.

### Conclusion

Student athletes make up a small portion of students in higher education today, however, they're participation in collegiate athletics can provide extensive notoriety to an institution. Unlike their non-athlete peers, they face a number of unique challenges that create stress, confusion and competing demands. This stress could hinder the holistic development of student athletes, which provides the necessary skills for student athletes to be successful academically. While many student athletes enter college with lower academic levels than their non-athlete counterparts, they are required to meet not only academic standards for the university, but also certain standards created by the NCAA that other students are not required to.

Since these students are faced with a number of challenges, many are not handling them successfully. Therefore it is the role of the student's academic advisor to provide the guidance needed to help these students maintain eligibility and acquire overall success by graduating. This

study used Kolb's theory of experiential learning to explore its potential as a rationale foundation and in the process integrate how academic advisors for student athletes can create a bridge between their sport and learning in and out of the classroom.



## CHAPTER THREE: METHOD

### Introduction

Collegiate athletics plays an important role in higher education today however, frequently the line between education and athletics is blurred and the mission of higher education is called into question. Student athlete academic advisors and learning specialists need to be aware of the challenges that college student athletes face and provide the necessary services using unique tools to help student athletes succeed by graduating. With the help of the rules and regulations created by the NCAA, academic advisors and learning specialists work with each student to ensure academic progress in order for the student athlete to remain eligible. The learning styles of student athletes also play a role in how academic advisors interact with their students. The purpose of this study was to investigate the role of the tools and resources used by student athlete academic advisors in the success of college student athletes. In addition, this study investigated the learning styles of the academic advisor for student athletes and the perceived learning styles of the college student athletes. By understanding the tools and resources used by academic advisors, the learning styles of student athletes and the background and learning styles of the academic advisor, recommendations can be made to improve the academic success of student athlete.

### Research Questions

The following research questions proposed guided this study:

1. What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?

2. What are the perceived learning styles of student athletes identified by their academic advisors and learning specialists at three public research institutions in the Southeast of the United States of America?
3. What are the qualifications of academic advisors and learning specialists who work with student athletes at three public research institutions?
4. Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?
5. Is there a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the student's academic success?

#### Null Hypothesis

Those questions that require a null hypothesis:

1. There is no association between the number of tools and resources used by the academic advisor and the graduation success rate of the three institutions.
2. There is no relationship between the perceived learning styles of the student athlete and the tools and resources used to ensure the student's academic success.

#### Research Design

This study employed a nonexperimental quantitative research paradigm. Quantitative research is an approach that tests objective theories by exploring the relationship among the variables (Creswell, 2014). These variables are typically measured by instruments that provide numerical data that can be analyzed using statistical procedures. For the purpose of this study, survey research was used. According to Sapsford (2007), survey research involves systematic observations or systematic interviewing. Dilman, Smyth and Christian (2014) added, that researchers ask questions to which they want to know the answers and the researcher often

dictates the type of answers they want. Essentially, Sapsford (2007) stated that standardization lies at the heart of survey research, as the point is to get “consistent answers to consistent questions” (p. 7).

It is important to note that according to Dilman et al. (2014), survey research is based on a sample rather than being a census of every member of the population. In addition, Dilman et al. (2014) stated that what makes the probability survey sample different from other types of research is that it can provide a close estimate to the distribution of a characteristic in a population by surveying only some of the members. Creswell (2014) stated that survey research provides a numeric description of the trends and attitudes of a population by studying a sample of that population. According to Creswell (2014), the advantages of using survey research are economy of design, rapid turnaround in the collection of data, and the ability to identify attributes of a large population by using a small group of people.

Descriptive statistics were used to analyze the data gathered for Research Questions One through Three. A Chi Square Test for Independence was used to answer Research Question Four as it was used to determine the association between the tools and resources used at the three institutions and their graduate success rates. A Chi Square Test for Independence was used to analyze Research Question Five. According to Flannelly, Flannelly and Jankowski (2014) an independent variable is a variable that has an effect on another variable. For this study, the independent variable was the tools and resources used by academic advisors at three institutions in the AAC. Flannelly et al. (2014) continued to state that a dependent variable is the variable researchers are most interested in understanding and predicting as it is dependent on the independent variable. For this study, the dependent variable was the Graduation Success Rate (GSR) at each institution.

## Setting

This study took place at three separate university campuses of the American Athletic Conference (AAC). The institutions were chosen because one of the institutions had the highest GSR of all public four-year universities in the country and the other two institutions are similar in conference, size and setting. As a result of the comparable nature of the institutions, it was easier to draw similarities for the purpose of the study.

The first institution, “A”, is a large public four-year university in the Southeastern United States. The population of the institution is between 40,000 to 60,000 students with students in accredited programs. The institution grants bachelor’s, master’s and doctoral degrees in over 100 different programs. During the academic year, the institution served a diverse group of students with 55 percent of the students reported as White, 22 percent Hispanic and 11 percent Black/African American (National Center for Educational Statistics (NCES), 2016). The institution’s Graduation Success Rate ranges between 90-99 percent for student athletes for 2014-2015 (NCAA, 2016b).

The second institution, “B”, is a large public four-year university in the Southeastern United States. The institution grants bachelor’s, master’s and doctoral degrees in over 100 programs and serves between 40,000 and 50,000 students in accredited programs. The institution has a diverse student population of 52 percent white, 20 percent Hispanic and 11 percent Black/African American (National Center for Educational Statistics (NCES), 2016). The Graduation Success Rate for student athletes attending this institution ranges between 80-89 percent for 2014-2015 (NCAA, 2016b).

The third and final institution, “C”, is a large public four-year university in the Midwestern United States. The population of the institution is between 30,000 and 40,000

students with students in accredited programs. The institution grants bachelor’s, master’s and doctoral degrees in over 100 different programs. The demographic distribution of this institution is 75 percent white, seven percent Black/African American, and 3 percent Hispanic (National Center for Educational Statistics (NCES), 2016). The institution has a graduation success rate for student athletes ranges from 70 to 79 percent for 2014-2015 (NCAA, 2016b). Refer to Table 2 for a breakdown of the three institutions.

Table 2: Breakdown of Three Institutions

<b>Institution</b>	<b>Number of Students</b>	<b>Setting</b>	<b>Number of Programs</b>	<b>Graduation Success Rate</b>
Institution A	40,000 to 60,000	Urban, Southeastern U.S.	<100	90-95%
Institution B	40,000 and 50,000	Urban, Southeastern U.S.	<100	80-85%
Institution C	30,000 and 40,000	Urban, Midwestern U.S.	<100	75-80%

### Population and Participants

According to Fowler (2009), a population is the total group that is being researched. Sapsford (2007) added that a population in survey research is a statistical terminology and when used in survey research it means the entire set of objects of which we intend to study. The population of this study were the academic advisors for all athletic departments in the American Athletic Conference, which is comprised of 11 institutions. The participants are members of the Academic Services for Student Athletes offices at the three institutions selected through a purposive sample. The questionnaire was sent to every academic advisor and learning specialist in these offices by email.

### Sample

According to Fowler (2009), a sample is a small group of the population. Sapsford (2007) continued to say that a sample closely resembles the population. A questionnaire was sent to all of the academic advisors for student athletes at the three identified institutions. The advisors were identified through the university's athletic academic advising webpage, which lists those who work with student athletes. This listing also provides their email addresses. In preparation for the web-based survey, an invitation email (Appendix B) was sent to all of these advisors. Exactly three days later, an email was sent with a detailed welcome letter and survey link (Appendix C).

### Sampling Techniques

The sampling technique that was used during this study is purposive sampling. Guarte and Barrios (2006) stated that purposive sampling is a "selection of sampling units within the segment of the population with the most information on the characteristic of interest" (p. 277). They followed up stating that purposive sampling yields the best estimates for the population of interest. According to Curtis, Gesler, Smith and Washburn (2000), purposive sampling is used when small samples are studied using intensive strategies. In addition, Groves (2011), declared that purposive sampling relies on the researchers situated knowledge of the field and when they have a rapport with the members of the target network. The researcher for this study is not only knowledgeable about the area of academic advising for student athletes but also is a member of the professional community. Her professional role affords a valuable perspective and pre-existing network among these advisors. As a result the researcher was able to use her network to achieve her selection of participants necessary for this study.

### Data Collection Methods

Data was collected using a questionnaire, which was distributed to all academic advisors and learning specialists at the three institutions identified as the sample setting. The questionnaire was called the Academic Advisor for Student Athlete (AASA) Questionnaire which was cross-sectional and designed partly by the researcher. In addition to the questions created by the researcher, the AASA Questionnaire also includes Kolb's Learning Style Inventory (LSI) 3.1 (See Appendix A).

### Procedure

Academic Advisors and learning specialists at the three selected institutions received an email announcement about the forthcoming questionnaire, which is provided in Appendix B. Three days later they received a welcome email with instructions and a link to the survey designed in Qualtrics. (A copy of the welcome email is provided in Appendix C.) There were 23 academic advisors and learning specialists at the three institutions that received the AASA Questionnaire. According to Fincham (2008), a 60 percent response rate on questionnaires should be the goal of a researcher. Based on that information, a return of 14 questionnaires was needed for a valid representation of the population.

Upon completion of the questionnaire, the academic advisor or learning specialist received a thank you email. (A sample of the thank email is provided in Appendix D.) Approximately one week later the participants that did not complete the questionnaire after the initial email were sent a follow up reminder email. A sample of the follow up email is provided in Appendix E. In order to protect the confidentiality of the institutions the information will be coded in the recording of the results. After that point, the schools' names will not appear anywhere in the data records and reports.

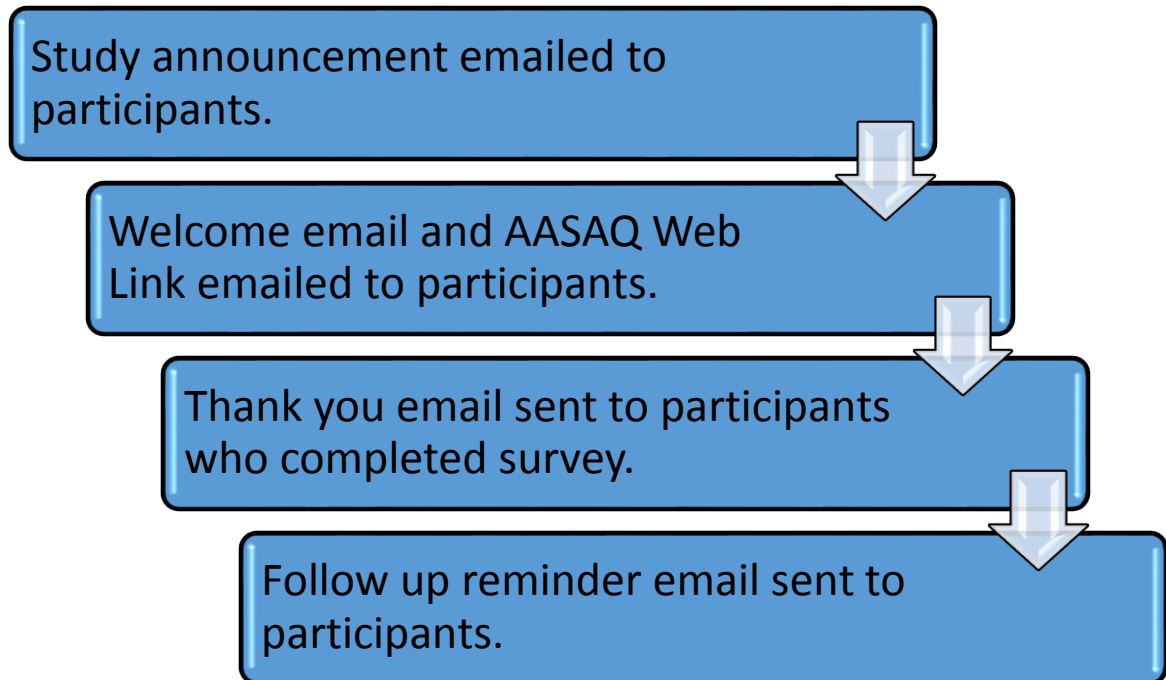


Figure 7: Procedure for Information Distribution to Participants

### Instrumentation

#### Learning Style Inventory (LSI)

While the LSI is the core instrument for this study, a custom (AASA) Questionnaire has been developed. This section defines both items. The researcher obtained permission from the Hay Group, a global management consulting firm that distributes various tools and products for educators, to utilize Kolb's Learning Style Inventory 3.1. The LSI was used to measure the learning styles of academic advisors and the perceived learning styles of student athletes. Kolb's Learning Style Inventory (LSI) is based on two-bipolar dimensions, and of how a person perceives and processes information (Gooden, Prezioni & Barnes, 2009).

Since the design of the Learning Style Inventory (LSI), Kolb revised it a number of times and the current version is known as LSI 3.1. Kolb and Kolb (2005) stated that the LSI is used to



identify which of the learning styles are associated with different approaches to learning. The instrument is easy to administer and score. The LSI 3.1 is composed of a 12-item questionnaire wherein participants rank their responses to the sentences provided. The final tally of ranked answers correspond with the four areas in Kolb's learning cycle; Concrete Experience (CE), Abstract Conceptualization (AC), Reflective Observation (RO), and Active Experimentation (AE). These four areas combine to create the four learning styles: Accommodator, Diverger, Assimilator, and Converger. All of these terms were explained in Chapter Two in detail.

### AASA Questionnaire

For this study, a three-part questionnaire has been developed. The items included in the questionnaire in Section I and II correspond directly with the information presented in the literature review, as well as the theoretical framework and the research questions used for this study. Sections I and II were designed by the researcher and created using Dilman et al. (2014) Principles for writing survey questions. Section I of the AASA Questionnaire asked about the participants' academic qualifications and their experiences with a total of four questions. Section II is a single question with 20 selections regarding academic advising tools and resources. The third section of the AASA Questionnaire included Kolb's LSI which encompasses a 12 item questionnaire used to identify the participant's learning style. The second part of the third section of the questionnaire consisted of an edited version of Kolb's LSI for the advisors to identify the perceived learning styles of the student athletes with whom they worked. The advisors were also asked to identify which of the tools and resources they would use with the student athlete who they based their responses on when describing their learning style. Due the recommendation of a member of the dissertation committee who specializes in statistics, the list of tools and resources differs from that of Section II as a number of options have been removed.

## Reliability and Validity

Salkind (1997) defined reliability as an element in research that will perform the same not only in the past, but also in the future. He continued to state that a reliable test will examine the same entity on more than one occasion and still receive the same result. According to McMillian (2005), the reliability of a questionnaire is primarily concerned with the dependability and consistency of the scores. As a result, it is important to understand and examine the reliability of Kolb's LSI.

There are several researchers that provide critiques of the Learning Style Inventory (LSI), both positively and negatively. Since its initial development in 1976, Kolb's LSI has undergone three revisions to strengthen the reliability and validity of the instrument after a number of researchers questioned the reliability. One of the main critics of the LSI is from Stumpf and Freedman (1981), who stated that there was little available empirical evidence that supported the LSI or Kolb's Theory of Experiential Learning. Metallidou and Platsidou (2008) added that Kolb's LSI has been criticized for its inconsistent psychometric properties and that there were also concerns about the test-retest reliability of the instrument.

However, there were a number of positive observations of Kolb's LSI which demonstrated the internal consistency of the LSI. Internal consistency is frequently statistically tested using Cronbach's Alpha and should be performed before an instrument is used for research purposes (Tarakoi & Dennick, 2011). It is important to note that according to Tarakoi and Dennick (2014), the internal consistency of an instrument is expressed as a number between 0 and 1. In a study by Loo (1999), the LSI's Cronbach's Alpha was calculated with the following results; CE- $\alpha$ =.82, RO- $\alpha$ =.82, AC- $\alpha$ =.80 and AE- $\alpha$ =.84. The results revealed the recommended level of internal consistency for the four learning dimensions.

An additional positive critique was recorded in a study by Yahya (1998), where the reliability analysis of the LSI revealed a high reliability of the instrument. Further, in a study by Kayes (2005) the LSI-3 showed evidence of both reliability and consistency. Due to these significant findings, Loo (1999) reiterated the usefulness of the Learning Style Inventory (LSI) as a pedagogical tool and has been widely cited in the literature.

Internal construct validity is “used to describe how accurately instrument scale constructs can be distinguished from one another and to what degree the constructs account for the variance found in the sample” (Kayes, 2005, p. 251). As with the reliability of the LSI, research on the validity of the LSI received mixed results (Kayes, 2005). Research completed by Loo (1996), found inconclusive results with regards to the LSI’s internal structure. However, in a study by Kayes (2005), it was reported that, with regards to internal construct validity that “between item” and “within item” correlations there is evidence to support internal construct validity.

Yahya (1998), reanalyzed the information presented by Wilcoxson and Prosser (1996) and stated that they found stronger and more complete support of the two factor bi-polar hypothesis in the LSI. In addition, they found that the two factors accounted for 73 percent of total variance. These results provide substantial support for the use of the LSI in educational research.

The reliability and validity of the LSI has received criticism and support since it was created by Kolb in 1976. It was due to the criticism that Kolb revised the instrument several times. While the instrument still receives criticism, it is still one of the most widely used research instruments (Kayes, 2005).

Alignment of Research Questions to Data Collected

Table 3 illustrates the section the research questions corresponds to, along with the corresponding question from the AASA Questionnaire that provided the data that was analyzed.

Table 3: Research Questions and Questionnaire Source Information

<b>Research Question</b>	<b>Instrument/Source</b>	<b>Questions</b>
<b>1. What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?</b>	Questionnaire – Section II	Question 5
<b>2. What are the perceived learning styles of student athletes identified by their academic advisors and learning specialists at three public research institutions in the South East of the United States of America?</b>	Questionnaire – Section III	Questions 7.1-7.12
<b>3. What qualifications and experiences do academic advisors who work with student athletes have at institutions in the American Athletic Conference?</b>	Questionnaire – Section I	Questions 2-4
<b>4. Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?</b>	Questionnaire – Section II	Questions 5
<b>5. Is there a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the students’ academic success?</b>	Questionnaire – Section III	Question 7.1-8.18

Analysis Methods

For the purpose of this study, the data was analyzed using the SPSS software program. Once the data was collected, it was analyzed using cross institution comparison and descriptive statistics (See Table 4.). Research Questions One, Two, and Three were answered using the descriptive statistics from the AASA Questionnaire. In addition, Research Question One, Two and Three used measures of central tendency in the form of Mean Median and Mode and was

depicted in the form of frequency tables and graphs. Research Question Four was answered using a Chi Square Test for Independence. Research Question Five was also answered using Chi-Square Test for Independence.

The inferential statistic used to analyze the data for Research Question Four and Five was a Chi-Square Test for Independence. According to McHugh (2011), a Chi—Square Test for Independence is a non-parametric test that is used to analyze group difference when the dependent variable is nominal. In the case of this study, for Research Question Four the dependent variable was the tools and resources used by academic advisors and learning specialists to ensure the academic success of the student athlete. For Research Question Five the dependent variable was the tools and resources used by academic advisors and learning specialists. McHugh (2011) continued to state that the Chi-Square Test for Independence is a robust test with regards to the distribution of data and it provides considerable information on how each group performed. This analysis allows the researcher to present a more detailed depiction of the results.

Table 4: Data Analysis Distribution of Research Questions

<b>Research Question</b>	<b>Instrument/ Source</b>	<b>Question Number</b>	<b>Analysis</b>
<b>1. What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?</b>	Questionnaire	Question 5	Descriptive Statistics – Measures of Central Tendency
<b>2. What are the perceived learning styles of student athletes identified by their academic advisors and learning specialists at three public research institutions in the South East of the United States of America?</b>	Questionnaire	Questions 7.1-7.12	Descriptive Statistics – Measures of Central Tendency
<b>3. What qualifications and experiences do academic advisors who work with student athletes have at institutions in the American Athletic Conference?</b>	Questionnaire	Questions 2-4	Descriptive Statistics – Measures of Central Tendency
<b>4. Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?</b>	Questionnaire	Questions 5	Descriptive Analysis - Chi Square Test for Independence
<b>5. Is there a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the students' academic success?</b>	Questionnaire	Question 7.1-8.18	Chi-Square Test for Independence

#### Limitations and Delimitations of the Study

The institutions selected for this study represent a purposive sample that includes three public research universities from the American Athletic Conference (AAC). This approach is generally used in qualitative studies; however, it is also used in cases when small samples are studied using intense methods (Curtis, Gesler, Smith & Washburn, 2000). The purpose of this

study was to provide in depth information as to what tools and resources are used to help the academic success of student athletes. The results were not generalized beyond the same AAC universities but were informative to institutions in the same conference as they all have similar budgets to fund the tools and resources. In addition, the results could apply to institutions in the more prestigious conferences, as they have larger budgets. Further, smaller athletic conferences will be able to use the information discovered about the perceived learning styles of student athletes and the academic education and experiences of the academic advisors.

This research used a quantitative, non-experimental survey study. Data was collected using a custom survey, the AASA Questionnaire, which consisted of Kolb's Learning Style Inventory. Additional questions that address this information from the literature was also included. As previously mentioned, there are a several researchers that question the reliability and validity of the LSI. Nonetheless, Freedman and Stumpf (1978) state that Kolb's Learning Style Inventory "is exemplary of instruments used in experiential learning" (p. 275). Kayes (2005) further supported the reliability and validity of the instrument. While there are arguments for and against Kolb's Learning Style Inventory, the instrument is still one of the most widely used instruments by educators for many different purposes (Duff, 2004).

### Summary

This study regarding learning styles and academic advising for student athletes was a quantitative research design. The sampling technique used was purposive in nature and the participants were selected from the academic advisors and learning specialists for student athletes at three institutions in the AAC. In addition, the AASAQ was distributed to the selected academic advisors for student athletes through email using the Qualtrics online survey software. The overall purpose of this study was to investigate the differences between the tools and

resources used at three institutions in the American Athletic Conference (AAC) and if they relate to the graduation success rate of each institution.



## CHAPTER FOUR: FINDINGS

This quantitative research study examined the tools and resources used by academic advisors and learning specialists with regards to the success of the student athletes with whom they work. In addition, the study identified the learning styles of the student athletes. Academic advisors and learning specialists at three higher education institutions that are members of the American Athletic Conference (AAC) were selected to complete the Academic Advisor for Student Athlete (AASA) Questionnaire. Chapters One and Two provided the necessary background and an overview of previous literature on this subject, as well as, identifies a theoretical framework that was included in the AASA Questionnaire. In addition, Chapter Three provided an outline of the research method and online AASA questionnaire that was used to collect the data for this study. The questionnaire, which was adapted by the researcher and included the Kolb's Learning Style Inventory (LSI) (Kolb, 2005). The LSI measures the learning style of the individual who completes the questionnaire. In the case of the data collection and questionnaire for this study, the participant was asked to complete the LSI for themselves as well as the last student athlete with whom they worked.

The purpose of this chapter is to present the data analysis of this research study. In particular, this chapter reviews the five research questions presented in Chapters One and Three, as well as, the results of the data collected. The collected data was analyzed through descriptive statistics and inferential statistics.

### Sample Description

Academic advisors and learning specialists from three institutions in the AAC were selected and invited to complete the online questionnaire. For the purposes of this study, online information assisted in identifying participants. The institutions' websites included the necessary

identifying and contact information. In December of 2016 the email invitation to participate in the online survey was sent to 23 academic advisors and learning specialists. Of the 23 participants, 15 responded to the questionnaire. As previously stated, based on the population size, the minimum response rate necessary to conduct the study was 14 participants (Fincham, 2008). The response rate for this study was met as 15 academic advisors and learning specialists completed their questionnaire. The following sections present the findings for each research question of this study. Narrative, tables and graphs provide a detailed presentation of the data.

### Research Question One

The first research question for this study was: *What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?* In order to address this research question, an analysis of descriptive statistics through measures of central tendency and normality of distribution were conducted. Table 5 presents the descriptive statistics for the tools and resources used by academic advisors and learning specialists. These data revealed a Mean of 17.73 tools and resources used, and a Median and Mode of 19. The maximum number of tools and resources possible for selection by academic advisors and learning specialists was 20. The Standard Deviation (SD) of the tools and resources used was 2.49 with a Variance of 6.21 and a Range of 9. The Variance of 6.21 is large, which implies that the number of tools and resources used by the participants had a wide distribution from the mean. The SD of 2.49 is also substantial which suggests, as with the Variance, that the tools and resources were not tightly clustered around the mean.

Table 5: Distribution of Tools and Resources Used by Three Public Institutions

<b>Statistic</b>	<b># of Tools and Resources</b>
Mean	17.73
Median	19
Mode	19
Standard Deviation	2.49
Variance	6.21
Range	9
Skewness	-2.046
Std Error of Skewness	.580
Kurtosis	3.655
Std. Error of Kurtosis	1.121
Total (N)	15

The analysis of the data also tested for normality of the distribution of the number of tools and resources to see if the data is normally distributed. The scores of the tools and resources were not normally distributed and showed a Negative Skewness of -2.046 (Standard Error = .580), which indicates the Median was greater than the Mean. The scores of the tools and resources also show a Leptokurtic kurtosis of 3.655 (standard error = 1.121), which suggests the data does peak but not substantially as shown in Table 5. Figure 8 illustrates, through a bar graph the Skewness of the scores of the tools and resources used by academic advisors.

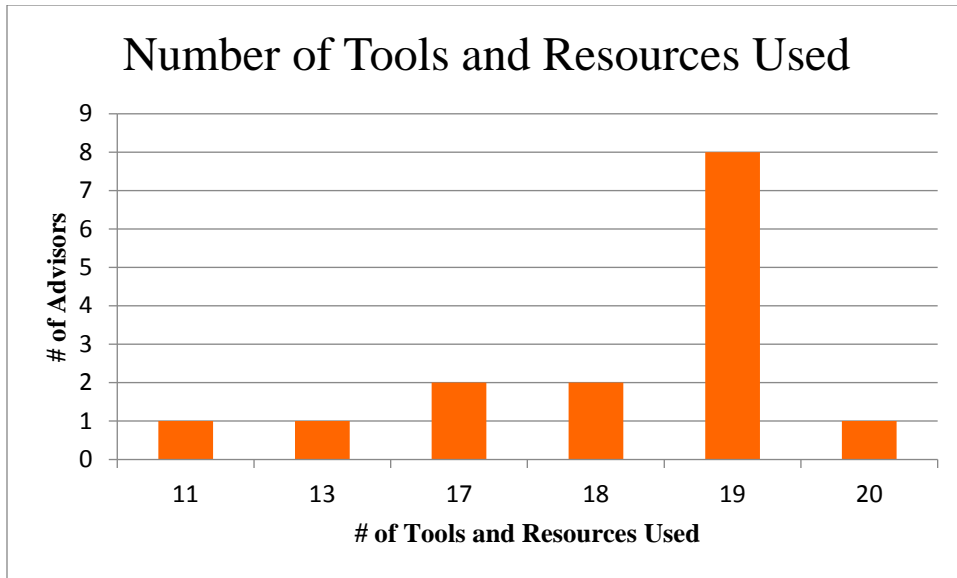


Figure 8: Bar Graph of Tools and Resources Used by Academic Advisors by Institution

Table 6 displays the detailed percentage distribution of the number of tools and resources used by academic advisors and learning specialists from the smallest number to the greatest number. Within the sample, 53.3 percent of the respondents reported using 19 different tools and resources. In addition, the total percentage distribution of participants using 18 through 20 tools and resources is 73.3 percent. This information demonstrates that approximately three quarters of the participants used 18 to 20 resources when advising their student athletes, while one third used between 11 resources to 17 tools and resources.

Table 6: Distribution of Tools and Resources Used by Academic Advisors and Learning Specialists

<b># of Tools and Resources</b>	<b>Frequency</b>	<b>Percent</b>
11	1	6.7
13	1	6.7
17	2	13.3
18	2	13.3
19	8	53.3
20	1	6.7
<b>Total (N)</b>	<b>15</b>	<b>100</b>

The distribution of tools and resources scores by institutions showed similarities and differences. Institution A and Institution C both had responses totaling 17, 18 and 19. However, Institution A reported a large number of tools in the 19 column and only one advisor reported having used 20 different tools and resources. The average number of tools and resources used by Institution A was 18.77 while Institution B reported an average of 12 and Institution C an average of 18.25, which highlights the similarities between Institution A and C. While Institution C did not have as many respondents as Institution A, the respondents still identified using between 17 and 19 tools and resources. A considerable difference was noted by Institution B when compared to the other institutions as the academic advisors for this institution reported using only 11 and 13 different tools and resources, which represented the lower end. Figure 9 displays the variation of scores among institutions.

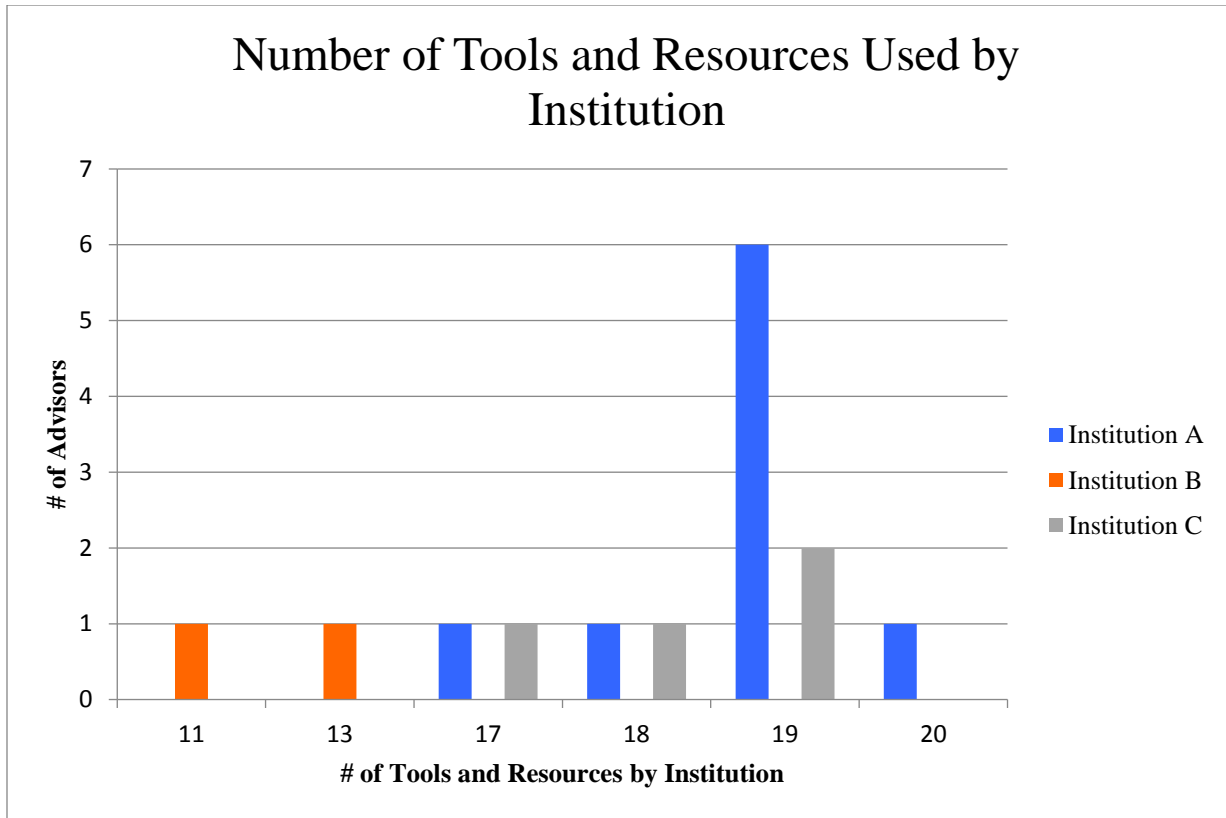


Figure 9: Tools and Resources Used by Academic Advisors by Institution

Figure 10 illustrates each of the tools and resources identified and the number of times they were selected by the academic advisors and learning specialists. All 15 participants used six of the 20 tools and resources, while eight were used by 14 of the academic advisors and learning specialists. Academic Progress Rate and the yearly advisor form were used the least by 12 academic advisors and learning specialist. One academic advisor or learning specialist identified the use of another tool or resource that was not listed however; they did not provide additional information about this tool or resource.

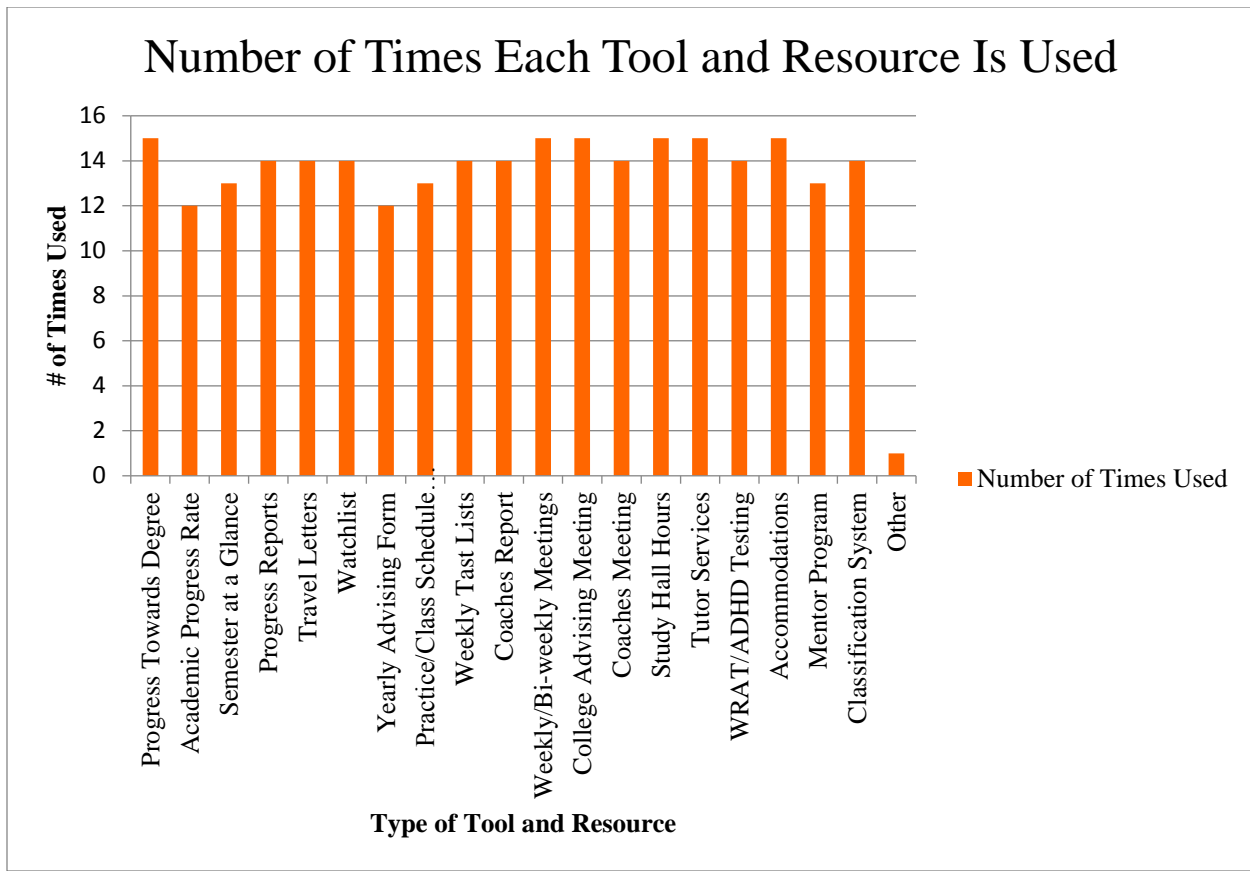


Figure 10: Distribution of the Type of Tool and Resource Used by Academic Advisors

### Research Question Two

The second research question identified the perceived learning styles for student athletes that were identified by the academic advisors and learning specialists at the three public institutions. In addition to the learning styles of the student athletes, the study analyzed the learning styles of the academic advisors and learning specialists.

#### Academic Advisor and Learning Specialist Learning Styles

Of the 15 academic advisors and learning specialists that completed the LSI questionnaire, five were Divergers, four were Assimilators and six were Accommodators. There were no academic advisors or learning specialists that were Convergers. Table 7 displays the

data regarding this item. Specifically, 40 percent of the participants were Accommodators, while 33.3 percent were Divergers and 26.7 percent were Assimilators.

Table 7: Academic Advisor Learning Styles

<b>Learning Style</b>	<b>Frequency</b>	<b>Percent</b>
Diverger	5	33.3
Assimilator	4	26.7
Accommodator	6	40.0
Converger	0	0
<b>Total (N)</b>	<b>15</b>	<b>100</b>

Figure 11 illustrates the distribution of the learning styles of the academic advisors and learning specialists by institution. These data reveal that Institution A and C both have Accommodators and Divergers, while only Institution A and B have Assimilators. Institution B also reported having an Accommodator, which is seen in both other institutions. The Converger category is not included in the figure because, as previously noted no participant identified as a Converger.



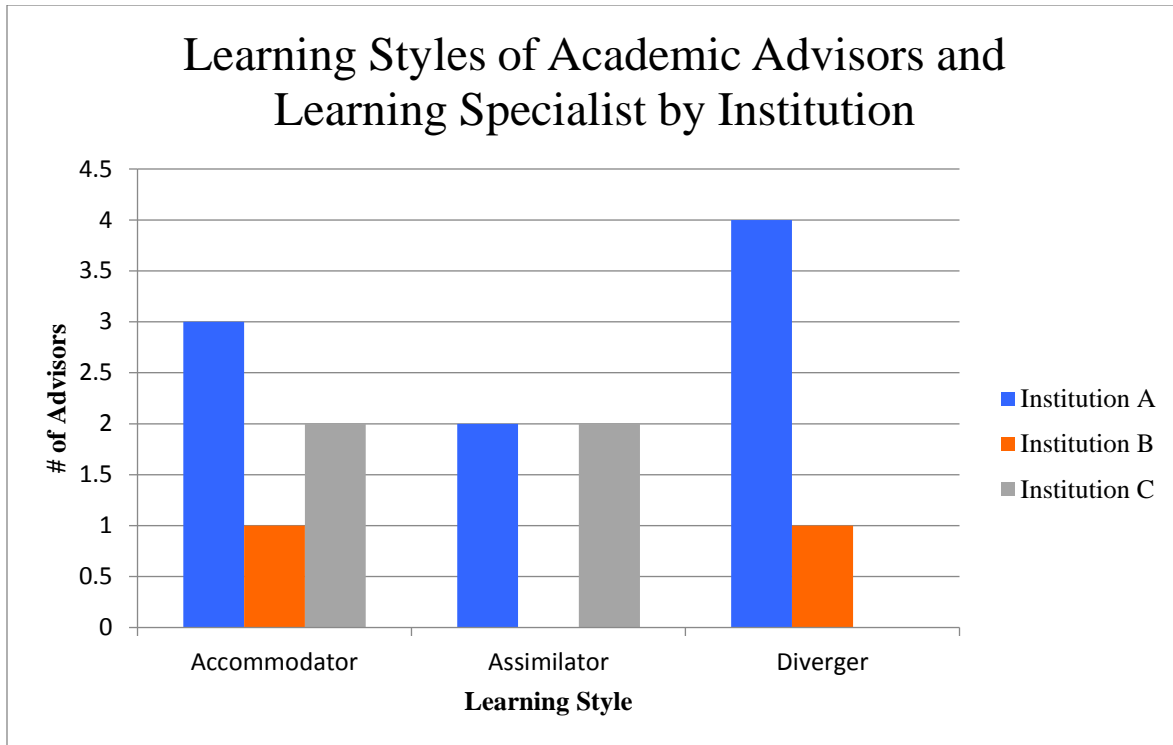


Figure 11: Distribution of Academic Advisors Learning Styles

### Student Athlete Learning Styles

For this study, the learning styles of the student athletes, as identified by the academic advisors and learning specialists, included five student athletes as Divergers, three Assimilators, five Accommodators, and one Converger. (Table 8.) Similar to the learning styles of the academic advisors and learning specialists, student athletes' learning styles largely consisted of Divergers and Accommodators at 73.3 percent. In addition, 6.7 percent were Convergers, while Assimilators represented 20.0 percent of the student athletes.

Table 8: Student Athlete Learning Styles

<b>Learning Style</b>	<b>Frequency</b>	<b>Percent</b>
Converger	1	6.7
Diverger	5	33.3
Assimilator	3	20.0
Accommodator	6	40.0
<b>Total (N)</b>	<b>15</b>	<b>100</b>

Figure 13 illustrates the distribution of student athlete learning styles by institution. Participants from Institution A reported having an equal distribution of Accommodators, Assimilators and Divergers whereas participants from Institution B only had student athletes who were either a Converger or a Diverger. Furthermore, as presented in Figure 12 participants identified student athletes from Institution C as either an Accommodator or a Diverger.

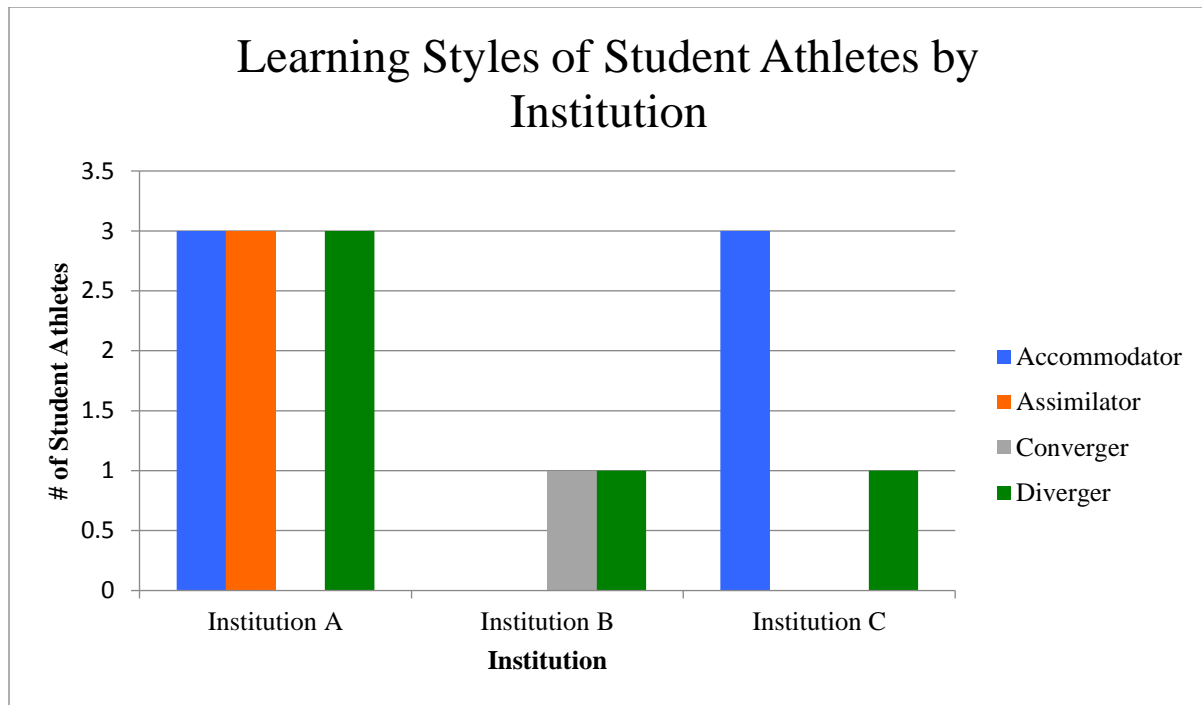


Figure 12: Distribution of Student Athletes Learning Styles by Institution

### Research Question Three

The third research question for this study was: *What are the qualifications of academic advisors and learning specialists who work with student athletes at three public research institutions?* The qualifications that were used for this study were whether the academic advisor was a student athlete when attending college, their highest earned degree and the number of years they had worked in the field as a fulltime academic advisor or learning specialist.

#### Student Athlete Experience

All participants provided information regarding whether they were a student athlete during college. Of these participants 11, or 73.3 percent, were student athletes, while the remaining 26.7 percent of the academic advisors reported not having participated as a student athlete in college. (See Table 9.)

Table 9: Academic Advisors who Participated as a Student Athlete

<b>Student Athlete</b>	<b>Frequency</b>	<b>Percent</b>
Yes	11	73.3
No	4	26.7
Total (N)	15	100

Figure 13 presents the distribution of academic advisors and learning specialists who reported that they were student athletes in college. Of the nine respondents for Institution A, seven stated they were former college student athletes while two were not. Participants from Institution B both reported being former student athletes. Of the four academic advisors and learning specialists at Institution C, half reported as former student athletes while the other half reported as non-former student athletes.

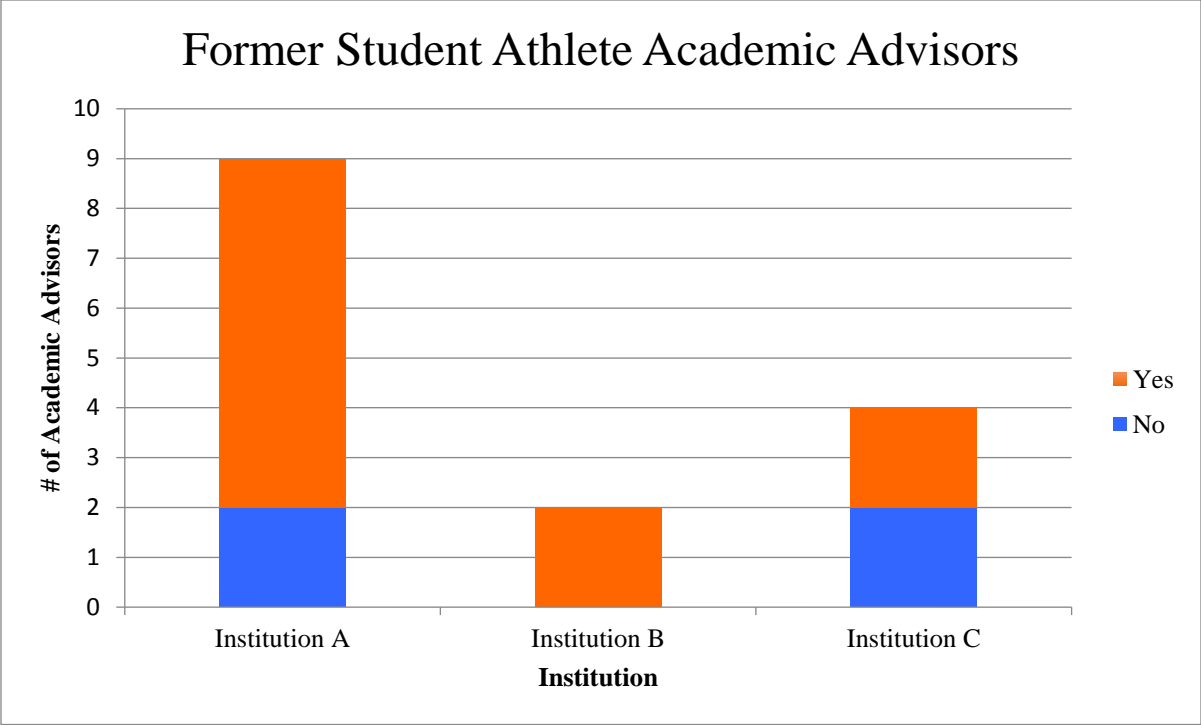


Figure 13: Distribution of Former Student Athlete Academic Advisors by Institution

Higher Education Degree

Regarding higher education degrees, of the 15 participants, 93 percent had a Master’s Degree, while 6.7 percent reported earning only a Bachelor’s degree (See Table 10.). All of the academic advisors and learning specialists from Institution A, which totals nine, have a Master’s degree. Two academic advisors from Institution B have a Master’s Degree. Three participants from Institution C have a Master’s Degree and one has a Bachelor’s Degree.

Table 10: Highest Degree Earned by Academic Advisors and Learning Specialists

<b>Degree</b>	<b>Frequency</b>	<b>Percent</b>
Bachelors	1	6.7
Masters	14	93.3
Total (N)	15	100

Years of Experience

The number of years of experience of the academic advisors and learning specialists that completed the questionnaire ranged from less than one year to 12 years. As displayed in Table 11, the Mean of the number of years of experiences was 5.71 years with a Median of six and a Mode of 12. The SD of the number of years was 3.98 years with a Variance of 15.85 and a Range of 11.83 years. In this case, the SD was relatively large which means the scores were not tightly clustered around the Mean. In addition, the Variance was very large at 15.85 years, which demonstrates that number of years of experience of the academic advisors are widely distributed from the Mean.

Table 11: Academic Advisors Years of Experience

<b>Statistic</b>	<b>Years</b>
Mean	5.71
Median	6
Mode	12
Range	11.83
Standard Deviation	3.98
Variance	15.85
Skewness	.468
Std Error of Skewness	.580
Kurtosis	-.896
Std. Error of Kurtosis	1.121
Total (N)	15

The analysis also tested for normality of distribution of the number of years of experience. The scores were not normally distributed and showed a skewness .468 (Standard Error = .580), which suggests the median was larger than the mean. The data reflected a platykurtic kurtosis of -.896 (standard error = 1.121), which demonstrated that the scores plateaued. This phenomenon is displayed in Table 11. Figure 14 illustrates a negative Skewness of the scores of the years of experience of the academic advisors and learning specialists. The negative Skewness demonstrated that the Median of the number of years of experiences is larger than the Mean.

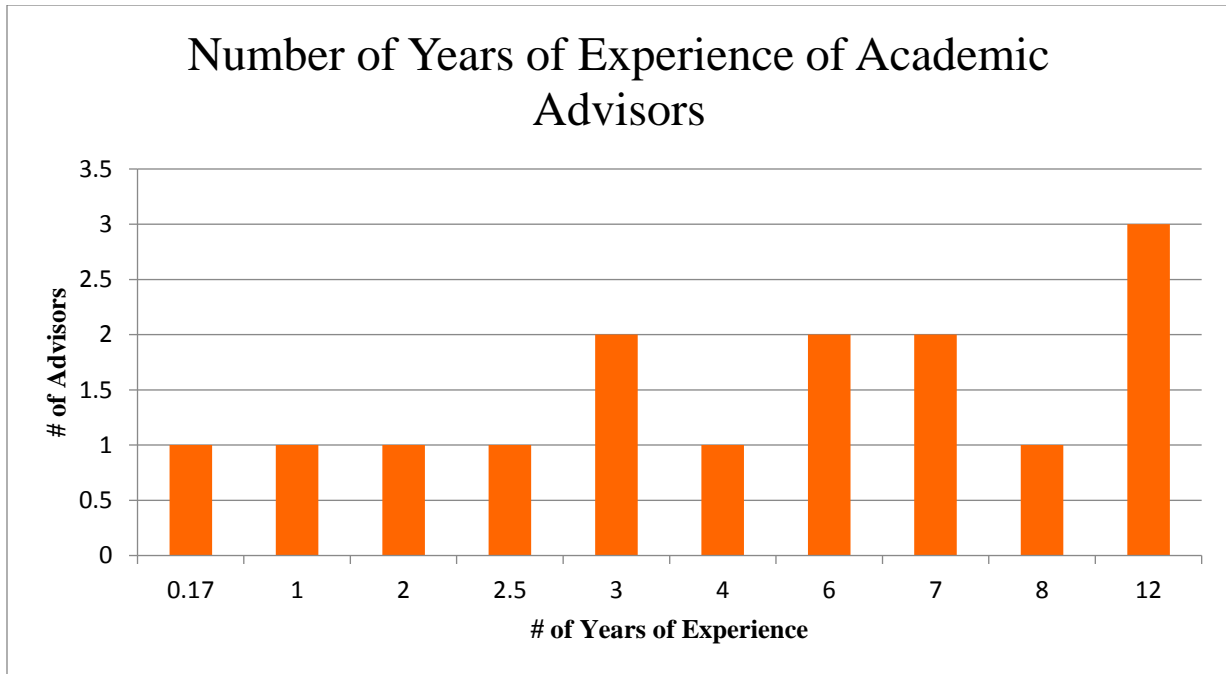


Figure 14: Distribution of the Years of Experience of Academic Advisors

As described in Table 12, 20 percent of the academic advisors and learning specialists had 12 years of experiences. Among the study sample, 53.3 percent of the academic advisors and learning specialists had greater than six years of experiences and only 20 percent of the sample reported two years or less years of experience.



Table 12: Distribution of Academic Advisors Years of Experience

<b>Years of Experience</b>	<b>Frequency</b>	<b>Percent</b>
<1	1	6.7
1	1	6.7
2	1	6.7
2.5	1	7.1
3	2	13.3
4	1	6.7
6	2	13.3
7	2	13.3
8	1	6.7
12	3	20.0
<b>Total (N)</b>	<b>15</b>	<b>100</b>

Figure 15 illustrates the distribution of the years of experience by institution. Institution A had both academic advisors with less than three years experiences, as well as advisors with greater than six years of experience. Institution A's years of experiences distribution demonstrated that the years of experience of the academic advisors is moderately spread out with advisors at both ends of the years of experience spectrum, both new to the field and very experienced in the field. Institution B had academic advisors and learning specialists with a wide range of years of experience, with one participant with less than one year of experience and one participant with greater than six years of experience. Institution C only had academic advisors

with more than four years of experience, with one participant reporting twelve years. These data demonstrate that Institution C's academic advisors and learning specialists are experienced in the field of academic advising for student athletes.

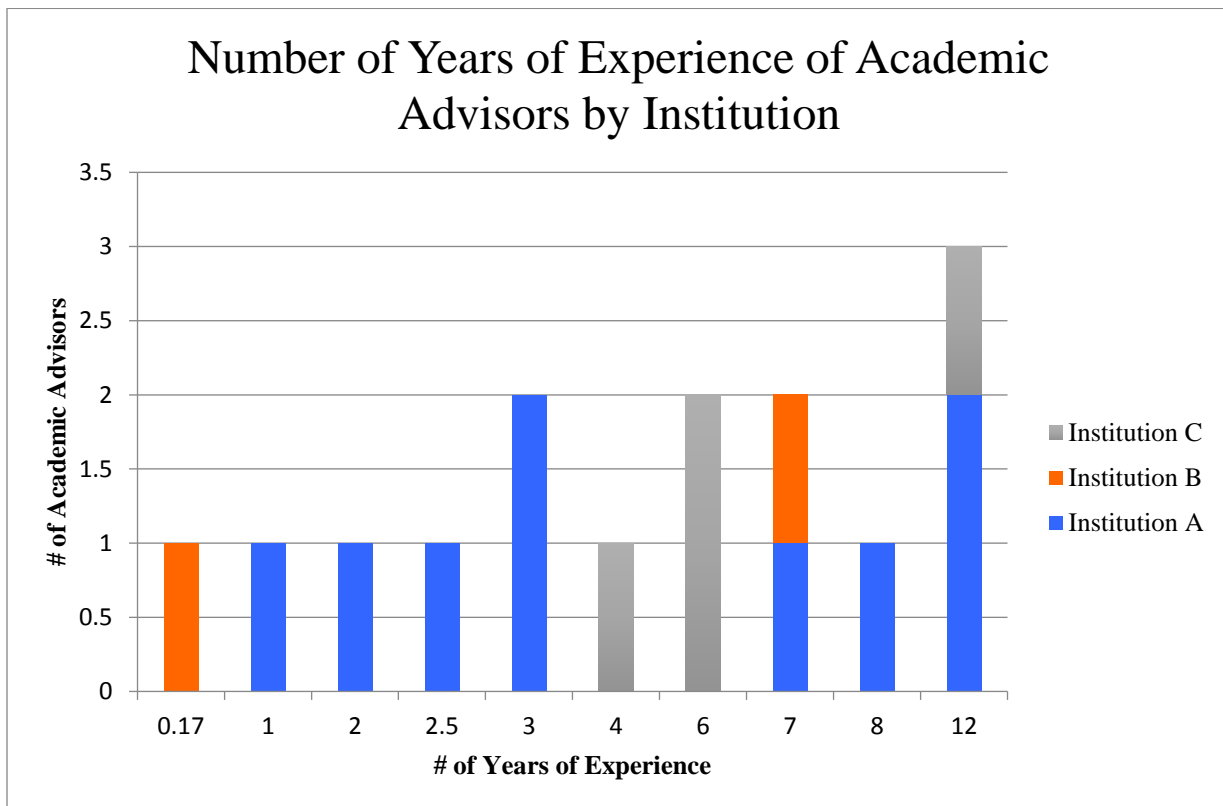


Figure 15: Distribution of the Years of Experience of Academic Advisors by Institution

#### Research Question Four

Research Question Four was the first inferential statistic question of the study. The question was: *Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?* A Chi-Square Test of Independence was conducted to determine the association between the number of tools used and the Graduation Success Rate (GSR). For this question, the tools and resources were split into

two categories. The first category consisted of 10-15 tools and resources used by academic advisors and learning specialists. The second category consisted of 16-20 tools and resources used by academic advisors and learning specialists. Regarding the GSR data it was predetermined depending upon the institution's published scores and the scores. The GSR information was grouped into three categories. The first category included GSR's between 70-79 percent; the second included GSR's between 80-89 percent, and the final group included GSR's between 90-99 percent.

In order to complete the Chi-Square Test for Independence, a critical assumption needed to be met. According to Pallant (2007), the lowest expected frequency in each Chi-Square cell should be five or more. If the assumption is violated, a Fisher's Exact Probability Test needs to be calculated once the Chi-Square Test of Independence is performed. According to McDonald (2014), the Fisher's Exact Test is used with smaller samples and identifies exactly the difference from the null, whereas a Chi-Square identifies approximates. Table 13 displays the data from the Chi-Square Test for Independence, which illustrates that study does not meet the assumption. Therefore, a Fisher's Exact Test was performed with the information presented below using an online Fisher's Exact Test Calculator.

Table 13: Contingency Table Between Tools and Resources Used and the Graduation Success Rate

Resource Group	Graduation Success Rate Group			Total
	70-79%	80-89%	90-99%	
10-15	0	2	0	2
16-20	4	0	9	13
Total	4	2	9	15

Note: All cells are not 5 or greater.

A Fisher’s Exact 2x3 Test was performed as the data above does not meet the assumptions for the Chi-Square Test for Independence. The test was conducted using an online calculator which was found on the vasser.net website. The Fisher’s Exact test indicated that there was a significant association between the number of tools and resources used by academic advisors and learning specialists and the institutional Graduation Success Rate as  $p = 0.009$  at a 0.05 level of significance.

#### Research Question Five

*The final research question of the study examined whether there was a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the student’s academic success? A Chi-Square Test of Independence was used to determine the relationship. The nominal variables identified for this test were the learning style of the athlete and the tools and resources used to advise the students. The students learning styles*

were grouped into four learning styles as identified by Kolb’s LSI. They were Converger, Diverger, Assimilator, and Accommodator. For this question, the tools and resources were split into two categories. The first category consisted of 7-12 tools and resources used by academic advisors and learning specialists. The second category consisted of 13-18 tools and resources used by academic advisors and learning specialists.

As with Research Question Four, the Chi-Square Test for Independence has an assumption that needs to be met in which each cell needs to have a value of five or higher (Pallant, 2007). Table 14 reveals that the assumption was not met.

Table 14: Contingency Table of Student Athletes Learning Style and the Tools and Resources Used

Resource Group	Student Athlete Learning Style				Total
	Converger	Diverger	Assimilator	Accommodator	
7-12	1	2	0	2	5
13-18	0	3	3	4	10
Total	1	5	3	6	15

Note: All cells are not 5 or greater.

A Fisher’s Exact 2x4 Test was performed as the data in Table 14 did not meet the critical assumptions of Chi Square Test for Independence. The test was conducted using an online calculator which was found on the vasser.net website. The Fisher’s Exact Test indicated that

there was no significant association between the number of tools and resources used by academic advisors and learning specialists, and the student athlete's learning style was  $p = 0.35$ .

### Summary

Chapter Four outlined the findings and the statistical analyses, which were conducted to support this study's five research questions. Descriptive statistics were conducted to evaluate the data for Research Questions One through Three through measures of central tendency and frequency. The Chi-Square Test for Independence and the Fisher's Exact Test were used to analyze data related to Research Questions Four and Five. This information will be used in Chapter Five, which will provide a discussion of the results and implications for the field of academic advising for student athletes and future research.

## CHAPTER FIVE: CONCLUSION

### Summary

This quantitative research study examined the tools and resources used by academic advisors and learning specialists with regards to the academic success of student athletes at three institutions in the American Athletic Conference (AAC). In addition, the study examined the learning styles of student athletes according to Kolb's Learning Style Inventory (LSI) and the tools and resources used to advise these student athletes. The Academic Advisor for Student Athlete (AASA) Questionnaire, which was adapted by the researcher, was used to accomplish the purpose of this study. The AASA Questionnaire was used to collect information regarding the academic advisor or learning specialist experience in the field, the tools and resources used by academic advisors and learning specialists, as well as, the learning styles of academic advisors and the student athletes with whom they work. The population for this study was comprised of a purposive sample of full-time academic advisors and learning specialists at three institutions in the AAC. An email invitation which contained the link to the AASA Questionnaire was sent to each academic advisor and learning specialist. Of the 23 participants that were invited 15 completed the questionnaire.

Five research questions examined the tools and resources used by academic advisors and learning specialists at the three separate institutions. In addition this study examined the learning styles of student athletes and the academic advisors and learning specialists. The aim of the study was to evaluate whether the number of tools and resources used by academic advisors and learning specialists affected the academic success of the student athletes through the institution's Graduation Success Rate (GSR). Furthermore, the study evaluated the learning styles of student

athletes and whether academic advisors use different tools and resources depending upon their learning style. The following research questions explored the research objective:

1. What are the similarities and differences between the tools and resources used by academic advisors and learning specialists at three public research institutions when advising student athletes?
2. What are the perceived learning styles of student athletes identified by their academic advisors and learning specialists at three public research institutions in the Southeast of the United States of America?
3. What are the qualifications of academic advisors and learning specialists who work with student athletes at three public research institutions?
4. Is there an association between the number of tools and resources used by academic advisors and the graduation success rate of the three institutions?
5. Is there a relationship between the perceived learning style of the student athlete and the tools and resources used to ensure the student's academic success?

#### Method Summary

This quantitative research study was completed in February and March of 2017. Of the 23 academic advisors and learning specialists identified through a purposive sample, 15 completed the online AASA Questionnaire. The participants were invited through an email to partake in the study. Once the data was collected, the researcher used descriptive statistics and inferential statistics to support the five research questions. Research Questions One through Three used measures of central tendency and frequency while Research Questions Four and Five used the Chi-Square Test for Independence. In addition, bar graphs were used to present the data distributed by institution or learning style.



### Findings by Research Question

A data analysis was completed for each of the five research questions utilizing the correct statistical method. The information provided in Chapter Four allowed the researcher to deduce the importance of the findings and provide suggestions for future research. The findings of each research question were discussed in each of the relevant sections.

#### Research Question One

Measures of central tendency and a frequency table were used to support Research Question One, which examined the similarities and differences of tools and resources used by academic advisors and learning specialists at three institutions. In addition to the tables, a bar graph displayed the distribution of the tools and resources used by each institution. The large Variance proposes that the number of tools and resources used by the academic advisors and learning specialists were widely distributed from the Mean. A Mode of 19 indicates that a majority of the respondents identified that they used a high number of tools and resources. This is supported by the Table 6 that shows 53.3 percent of the participants used 19 tools and resources when working with student athletes. When this information is separated by institution, Institution A and Institution C reported using over 17 different tools and resources while Institution B only used 11 and 13 tools. The only difference between Institution A and Institution C is that Institution A recorded the highest number of respondents and the largest number of academic advisors and learning specialists using 19 different tools and resources. Institution B differed from both other institutions as the respondents recorded only using the minimal number of tools and resources reported. This number was significantly lower than the other two institutions.

Academic Advisors from Institution A were consistent when addressing the tools and resources question reporting between 17-20 tools and resources used. One reason to explain this phenomenon is that the institution's academic advising for student athletes office policy could dictate the number of tools and resources used with every student. A tools and resources office policy might also be used at Institution C as their use of the tools and resources are similar to Institution A. Institution B, however, might not necessarily have an office policy in place that requires the academic advisors to utilize certain tools and resources. Such a situation would result in the lower number of tools and resources used. The office policy of the academic advising for student athlete unit could be an area to examine in future research

Another reason for the differences in the number of tools and resources used by the institutions could be the size of the budget of the academic advising for student athlete office. Some of the tools and resources listed require substantial funds that might not be available at all institutions. One such example is a student athlete Mentor Program, which is a program that provides mentoring to student athletes from graduate students and interns. The students that provide mentoring for student athletes are paid for their time and depending upon the number of mentors, and the number of student athletes that need mentoring, the cost of such a program could be too significant for the budget of the academic advising for student athlete office. The number of student athletes that need mentors is decided by the academic advisors and learning specialist. It is important to note that academic advisors and learning specialists from Institution B reported that they do not have a Mentor Program; however, the other two institutions do have the program.

Another cause for the differences between the tools and resources used by Institution B and the other two institutions is the experience of the academic advisors and learning specialists.

Institution B, at the time of the study, was not fully staffed and one of the participants reported having less than one year of experience in the field. This inexperience could result in the academic advisor not understanding the number of different options to use when working with student athletes. Both Institution A and C, have a least one advisor with greater than 12 years of experience, who could train the less experienced staff on the importance of the tools and resources. While Institution B has one academic advisor with greater than six years of experience this “senior” level of experience is vastly different than the 12 years at the other institutions. Leadership and experience is important to all areas of higher education especially in the area of academic advising for student athletes.

It is important to note that college advising meeting was one tool and resources that all academic advisors and learning specialists reported to using. The inclusion of such a tool is important since, according to Egan (2015), on campus academic advisor play an important role in higher education as they guide the student through the general education requirements as well as help the students navigate the curricular system of the area of study for the university. Academic advisors and learning specialists for student athletes are not educated in specific major requirements, which is an area that needs to be conducted by the experts from that specific college. This information reinforces the importance of on campus advisors and connects to the literature of this study.

### Research Question Two

Research Question Two examined the perceived learning styles of the student athletes. Measures of central tendency and a frequency table displayed this information. For this question, the learning styles of the academic advisors and learning specialists were also included. The data for the perceived learning styles of the student athletes was very similar to that of the academic

advisors and learning specialists. The Mode was the Accommodator learning style, which made up 40 percent of the respondents. It was closely followed by the Diverger learning style. There was one difference between the academic advisors and learning specialist learning styles and the student athletes learning styles, which was that there was a Converger learning style reported for only the student athletes. One reason for the student athletes learning styles consist of mainly Accommodators and Divergers is because of the definition of learning styles used in the Kolb Experiential Learning Theory (KELT). (See Figure 16.) Accommodators learn best through Concrete Experiences, which is Stage One of KELT (Cakiroglu, 2014). According to Russell-Bowie (2013), Concrete Experience is the stage where learners are actively involved and are learning through the experience. According to Cakiroglu (2014), Divergers learn best through Concrete Experience and Reflective Observation. Students who learn best through Reflective Observation learn by reflecting back upon their experiences at a previous stage to understand what they learned (Russell-Bowie, 2013). Both Concrete Experience and Reflective Observation connect with how student athletes learn playing their respective sport. With these stages learners are actively involved in understanding how to play the sport and experience firsthand. They discover how their actions can change the outcome of their competition. As a result, student athletes can transition these learning styles from their sport to their academics which results in the Accommodator and Diverger learning style.

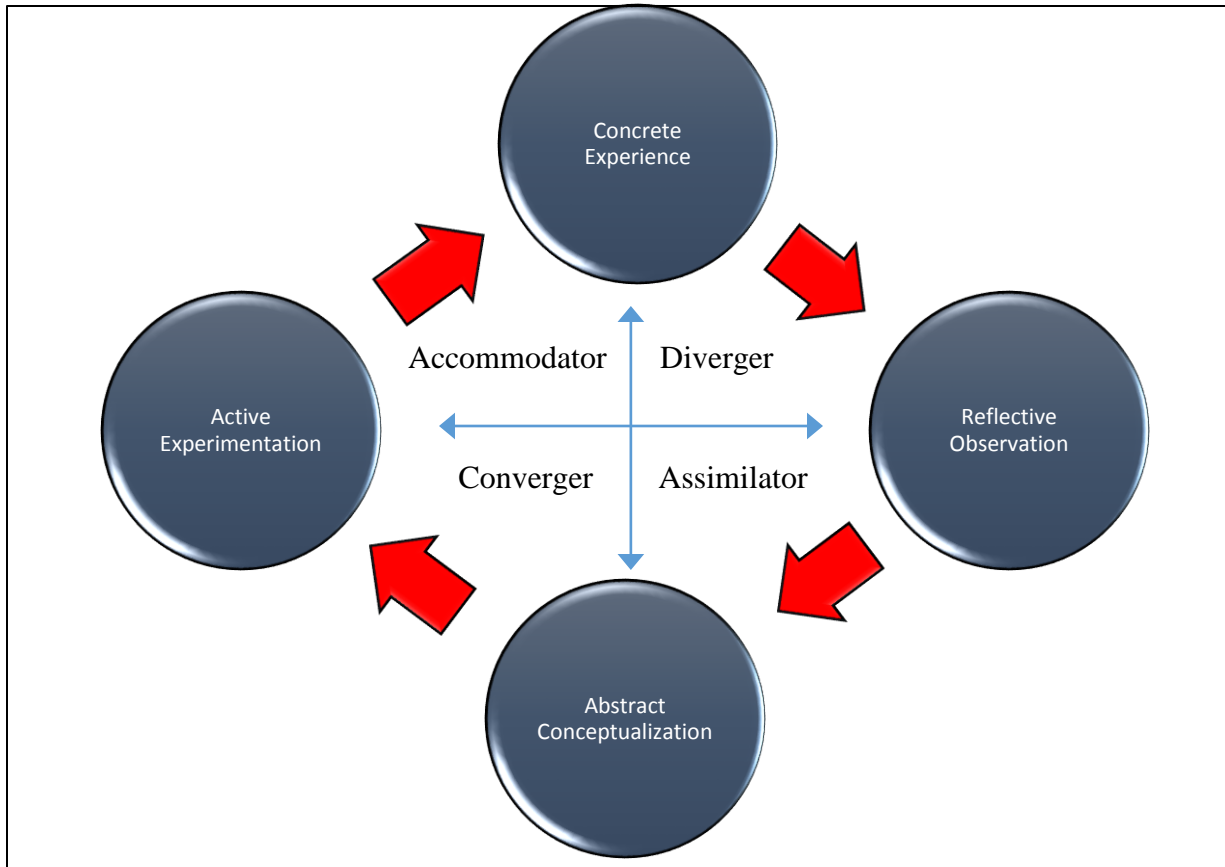


Figure 16: Kolb's Learning Cycle Model (Kolb, 1985)

In addition to student athlete learning styles, academic advisors' and learning specialists' were also recorded. For the academic advisors and learning specialists, the largest reported learning style was Accommodator closely followed by Diverger. The high number of Accommodators is consistent literature in this field as Fortney (1994) reported that most master's degree students in Student Affairs mostly consist of Accommodators. Of the fifteen participants, there were no reported Convergers. It is important to note that the learning styles of the academic advisor mirrors that of the student athletes, which is important as they can help provide the necessary support needed for student athletes. This finding demonstrates that academic advisors and learning specialists understand how student athletes learn. One reason that the learning styles

of the academic advisors and learning specialist mirror the student athletes is because approximately 75 percent of the academic advisors and learning specialists are former student athletes.

### Research Question Three

Research Question Three examined the experiences of the academic advisors and learning specialists. For this question data, included the highest degree earned by the academic advisor or learning specialist, the number of years of experience the academic advisor or learning specialists has and whether the academic advisor or learning specialist was a student athlete in college. Measures of central tendency and a frequency table displayed the years of experience while bar graphs and frequency tables illustrated highest earned degree and whether the participant was a student athlete during college.

The Variance for the years of experience was sizeable, which indicates the years of experience were widely distributed amongst the 15 participants. Of the participants, 20 percent reported having 12 years of experiences however, 20 percent were also reported to have two years and less experience. This suggests that at least 40 percent of academic advisors and learning specialists were either vastly experienced or inexperienced. Since 20 percent of the participants were inexperienced, it could be concluded that the academic advisor and learning specialist position has a high turnover rate and those with more than three years of experience choose to move institutions to get more experience. It could also be concluded that since 20 percent of the participants were vastly experienced because there is an oversaturation of the next level of position as there are few positions available nationwide and a large pool of applicants.

73.3 percent of the academic advisors and learning specialists were former student athletes, which allowed them to understand what their student athletes experience. The high

percentage of academic advisors and learning specialists who were former student athletes confirm the literature since according to Harmon (2010) advisors needed to commit to being allies of student athletes and demonstrate their knowledge of the student athletes experiences. Sedlack and Adams-Gaston (1992) also suggested that it is important for academic advisors and counselors to understand the world of the student athlete. This connection is highly visible in the results as approximately three quarters of the participants reported as former student athletes. The knowledge and experiences of having been a student athlete could also play an important role in the academic success of the student athletes at the three institutions as the academic advisors could use their experience to help the student athletes. Institution A has the highest number of former student athletes, which again could play a role in the high GSR.

Finally, with regards to the highest degree earned, all but one academic advisor and learning specialist had earned a Master's degree. One academic advisor responded that their highest degree was a Bachelor's degree; however, they also reported to having six years of experience. The reason that almost all of the academic advisors and learning specialists have a master's degree is that it is often a minimum qualification for the position upon hiring. Since all but one reported having a Master's degree it could be concluded as a hiring requirement nationwide.

#### Research Question Four

For Research Question Four, a Chi-Square Test for Independence was conducted but since the critical assumptions of the test were not met, a Fisher's Exact Test was performed to analyze the association between the number of tools and resources used and the GSR of each institution. The results of the Fisher's Exact Test indicated that there was a significant association between the number of tools and resources used and the institution's GSR.

Therefore, it can be concluded that the greater the number of tools and resources the higher the GSR. Institution A, which has the highest GSR of the three institutions, also has the highest number of tools used, eight of the participations reported they used between 17-19 different tools and resources with one participant reporting using 20 tools and resources. Institution B, which has a GSR between 80-89 percent reported using 11 and 13 tools and resources, the lowest amount reported by all participants. Institution C reported the lowest of the three GSRs between 70-79 percent, however the participants reported using 17-19 tools and resources. There is a gap in the literature addressing the different types of tools and resources used by academic advisors and learning specialists so in order to get a better understanding of the impact of the tools and resources it is imperative that some of the tools are analyzed individually.

There are numerous possible explanations for the association between the high GSR and the number of tools and resources used. The first such explanation is that Institution A used, on a higher level, the tools and resources designed to address the challenges face by student athletes. One such area that was addressed by the tools and resources is time management. According to Sharp and Sheilley (2008), the time demands of being a student athlete often times have a negative effect on the student athlete. Two tools and resources that allow student athletes to better balance their responsibilities understand their academic and sport responsibilities, are the weekly task list and the weekly/bi-weekly reports. The weekly task list is created by the academic advisor or learning specialist with the student athlete every week. The information included on this task list are the academic responsibilities that need to be completed for that week and the athletic time commitments of the student athlete. The weekly/bi-weekly meetings are conducted with the academic advisors and learning specialists, where the student athlete asks questions, gives grades and receives help on academic tasks. The weekly/bi-weekly meetings



allow the student athletes to get a better understanding of what they have to do and how long it will take them. Both of these tools and resources are used by all three institutions, but predominately by Institution A, who has the highest GSR.

In addition to the weekly task lists and weekly meetings, progress reports are another tool that can positively affect the GSR. Progress reports are designed by the academic advisors and learning specialists to interact with the faculty members of the student athletes. The reasons for progress reports are twofold. First, they allow the student athlete and academic advisor or learning specialist to interact with faculty members in order to negate negative stereotypes faculty members often have with student athletes. This explanation connects directly with the literature, since as previously mentioned faculty often have a negative perception of student athletes as over privileged and academically unmotivated. (Comeaux & Harrison, 2011; Harmon, 2010; Jolly, 2008; Levine, Etchison & Oppenheimer, 2014). By asking the faculty members to interact with the student athletes about their grades and progress in the class, there is a chance to dispel any negative perceptions. The second reason for progress reports is to track the student athlete's grades and design an academic plan for those students who are failing. Progress reports generally closely coordinate with the watchlist, which is sent to the coaches and provides a detailed report on how the academic advisor or learning specialist is intending to work with the student athlete to better their grades. With that being said, it is important to note that of the three institutions progress reports are used by all academic advisors and learning specialists at Institution A and Institution C. However, only one participant from Institution B used progress reports. In addition, the watchlist was not used by all members of Institution B. Not using these tools and resources could result in a lower GSR as they directly affect the semester grades of student athletes and the rapport of the faculty members and student athlete.

Another cause for the association between the number of tools and resources used and the GSR is the number of full time academic advisors and learning specialists employed by the institution. Of the 23 academic advisors and learning specialists identified, nine were employed by institution A, eight were employed by Institution C, and six were employed by Institution B. However, at the time the study was conducted, at the beginning of the 2017 spring semester, Institution C and B were not fully staffed. This results in academic advisors and learning specialists having to advise more student athletes and does not allow for the proper attention to be given to each student. Institution A was also faced with turnover, however, due to their academic advising training program they were able to promote from within.

#### Research Question Five

Research Question Five examined the association between the tools and resources used by academic advisors and learning specialists and the four learning styles identified by Kolb. As with Research Question Four, a Chi-Square Test for Independence was used to examine this question. Since the data did not meet the critical assumptions of a Chi-Square Test for Independence, a Fisher's Exact Test was used. The test reported no significance between the student athlete learning style and the tools and resources used. As a result, no conclusion can be drawn whereby an academic advisor or learning specialist uses a specific amount of tools and resources depending upon the student athletes learning style. Prior research in this area by Kolb proposes that students with different learning styles absorb information differently depending upon their type of learning style. As a result, it could be proposed that certain tools and resources would work better with some learning styles as they directly connect with the way in which a student learns. However, the findings suggest that the tools and resources used to not connect with the student athletes learning style. Academic advisors and learning specialists might use

their experience to determine which tool or resource would work best with each student and the student athletes learning style does not play a role in the decision. However, this area, the choice of tools and resources for students, if further studied could help academic advisors and learning specialists increase the graduation success rate of the institution. Understanding the learning style of a student would allow the advisor to more efficiently select and use the tools and resources that directly relate to the student's learning style and therefore increase their understanding of a subject and increase their academic success.

### Limitations

There were a number of limitations experienced during this study that were not originally identified. The first such limitation was the lengthy period of time the Institutional Review Board (IRB) took to approve the study, which was approximately two months. In addition, the study was approved in late December, which resulted in the distribution of the questionnaire during the winter break holiday resulting in limited participation.

The second limitation occurred when identifying the participants for the study. While there were 23 academic advisors and learning specialists identified using the each institution's athletic academic services website, a number of problems were experienced in the dissemination of the questionnaire. While numerous individuals were identified, once contacted, it was discovered that these individuals no longer worked for the institution and there were no replacements. As a result, the researcher requested additional assistance from the Senior Associate Director of Academic Services for Student Athletes at Institution A to forward the questionnaire to his counterparts at the other identified institutions, with whom he had an established professional rapport. Finally, these individuals disseminated the questionnaire to their

subordinates. Therefore, what had been expected to be two weeks of data gathering resulted in a two month process.

Furthermore, there were a number of limitations of this study with regards to the methodology. One such drawback was that this study did not take into consideration the academic levels of the student athletes upon entering the institution. Since student athletes are typically admitted to college because of their athletic prowess, the academic level of the student is often not considered as stated by Winters and Gurney (2012). As a result, student athletes might not be able to sustain the academic rigor of college classes and significantly affect the GSR of the institution no matter the role and efforts of the academic advisor or learning specialist. The academic levels of incoming student athletes is not recorded and analyzed in this study, but could be the basis for further research.

#### Recommendations for Practice

The findings of this study support the notion that the academic success of the student athletes is associated with the number of tools and resources used by the academic advisors and learning specialists. Institution A, which has one of the highest GRS of all public Division I institutions in the United States reported using the highest amount of tools and resources. The success of Institution A and the number of tools and resources used could be used as an example for all other institutions in higher education Division I athletics on ways to increase the graduation success rate of their student athletes. While the study does not take into consideration the incoming academic level of the student athletes, the study does find significance between the number of tools and resources used and the GRS, which cannot be ignored.

It also can be concluded that the type of tool and resource can play an important role in the academic success of the student athlete. All participants of Institution A use between 17-20

tools and resources and reported using tools that other participants at the other institutions did not use. The yearly advising form and the Academic Progress Rate (APR), are two such tools that are not used by all institutions, but are important as the APR tracks the academic success of the athletic team. Additionally, the yearly advising form tracks the classes of the student three semesters ahead allowing the academic advisor to prepare the student athlete for future classes. Both tools and resources play an important role in the academic success of the student athlete.

The findings of this study also illustrated that student athlete's learning styles mostly consist of either an Accommodator or Diverger. An Accommodator, according to Çakiroglu (2014), learns best through feeling and doing while a Diverger learns best through feeling and watching. This information is important for an academic advisor or learning specialists to understand as both learning styles incorporate feelings as a learning function and experiences play an important role in how the student learns. Knowing a student learns best through specific mediums allows the academic advisor and learning specialists to create an environment where the student athlete is more likely to succeed. While there was no significance between the number of tools and resources and the student athletes learning style it is still imperative to understand how most student athletes learn in order to increase the academic success of the institution.

#### Recommendations for Future Research

This study is one of the first of its kind and as a result there are a number of recommendations for future research in this area. The recommendations for future research can be divided into two specific areas; method recommendations and content recommendations. Both are equally important to better understand the academic advising for student athlete field.

## Method Recommendations

This study did not incorporate the academic level of the student athletes reported, as it only included the perceived learning style of the student athlete. However, in order to get a better understanding the academic success of each of the three institutions, it important to know the level of academic standing for the student athletes upon entering the institution. It could be concluded that one of the reasons for the success of Institution A is that the academic level of their students is higher than that of the other institutions. In order to conclude that the practices of the academic advisors and learning specialists are the reason for the high GSR, the question of the type of student athlete enrolled needs to be removed as a possible variable. However, it is important to note that due to the nature of college athletics this information might not be easily attainable, as athletic departments tend to be secretive by nature. Upon dissemination of the AASA Questionnaire for this study, numerous academic advising supervisors questioned the nature of the study and the use of the data, whether the information would remain anonymous. If questions of student athlete GPA's are included the rate of return of study materials might not be high enough to reach the required effect size. Determining strategies to overcome those obstacles will be needed to advance such research.

In addition to the GPA of student athletes, future research can also include the number of students with a documented learning disability. Wide Range Achievement Tests (WRAT) and ADHD testing, both tools and resources identified on the AASA, were reported by 14 of the 15 academic advisors and learning specialists. Upon completion of the testing and depending upon the results, numerous resources are assigned to the student athlete according to their documented learning disability. At many institutions this includes one on one sessions with learning specialists. As a result of time needed for student athletes with learning disabilities, the number

of learning specialists employed by an institution can also play a role in the academic success of the student athletes.

While this study only analyzed the number of tools and resources used by academic advisors and learning specialists, future research can examine each type of tool and resource. These tools and resources can be categorized according to their usage and impact on a student athlete's academic advancement. In addition to the resources needed for these students, the sheer amount of students with learning disabilities can affect the GSR of an institution. Students with learning disabilities tend to struggle academically and more and are more likely to drop out than an average student. Accommodations for such students need to be identified and used. Cooperation with the institution's office of accessibility could be a pivotal advancement.

#### Content Recommendations

Since this study only focused on three institutions in the American Athletic Conference the information obtained might not necessarily apply to all institutions in Division I athletics. As a result, an area of future research could examine the different tools and resources used at other conferences such as the South East Conference and the Big Ten Conferences, which are both members of the Power Five Conferences. Due to potential additional resources provided by these institutions and student athletes with different characteristics it may be found at these schools that the findings could be vastly different.

In addition to the type of institution, future research can also include the academic level of the student athletes upon entering college. This information can also include the number of student athletes that are reported to have a diagnosed learning disability. At most institutions, those students who are diagnosed with a learning disability are required to meet with a learning specialist who assists the student's learning using strategies designed for students with specific

learning disabilities. As a result of this, the number of learning specialists employed by an institution can also play a role in the academic success of the student athletes.

While this study only analyzed the number of tools and resources used by academic advisors and learning specialists, future research can examine each type of tool and resource. These tools and resources can be categorized according to their usage and impact on a student athlete. In addition to the resources needed for these students, the sheer number of students with learning disabilities can affect the GSR of an institution. These students tend to struggle academically and are more likely to drop out than an average student.

### Conclusion

This study explored a number of entities of academic advising for student athletes in higher education. It examined the number of tools and resources used by academic advisors and it was determined that they play an important role in the Graduation Success Rate of the institution. This study also found that student athletes' learning style are largely made up of the Accommodator learning style and the Diverger learning style, both of which learn mostly through feeling. This information is important for academic advisors and learning specialists as they create environments conducive to learning.

This research also found that most academic advisors and learning specialists hold a Master's Degree or higher and that over half are former student athletes. In addition, as with the student athletes the learning styles of academic advisors are also mainly Accommodators and Divergers. One area of information that is inconsistent is the number of years of experience as the number of years varies from less than one year to twelve years of experience. Overall, the information provided by this study is important to this field as it provides necessary information for improving academic success in the field of academic advising for student athletes.



APPENDIX A: ACADEMIC ADVISOR FOR STUDENT ATHLETE QUESTIONNAIRE

**SECTION I – Background Information**

**Q1. Which institution do you work for?** \_\_\_\_\_

**Q2. What is your highest earned academic degree?** \_\_\_\_\_

**Q3. Approximately how many years have you worked as an academic advisor/learning specialist for student athletes?** \_\_\_\_\_

**Q4. Were you a student athlete in college?**

**A** Yes

**B** No

**SECTION II – Tools and Resources**

**Q5. Academic Advisors for Student athletes use a number of tools and resources to ensure the academic success of their student athletes. Each item present below has a basic description. Please select each of item from the list that closely represents the tool and resources used by your office. Check all that apply.**

<b>A</b> <input type="checkbox"/>	<b>Progress Towards Degree Spreadsheets</b> – <i>spreadsheet on each student athlete detailing degree applicable classes to ensure the meet the 40/60/80 Progress Towards Degree Requirements</i>
<b>B</b> <input type="checkbox"/>	<b>Academic Progress Rate Spreadsheet</b> – <i>spreadsheet detailing each teams Academic Progress Rate</i>
<b>C</b> <input type="checkbox"/>	<b>Semester at a Glance</b> – <i>spreadsheet detailing class assignments and grades for the semester.</i>
<b>D</b> <input type="checkbox"/>	<b>Progress Reports</b> – <i>reports given to student’s instructors to report student’s current grade in the class. Given to instructors to complete twice a semester.</i>
<b>E</b> <input type="checkbox"/>	<b>Travel Letters</b> – <i>Letters given to instructors by student athletes to sign that detail the dates the student will be absent from class while competing.</i>
<b>F</b> <input type="checkbox"/>	<b>Watchlist</b> – <i>Spreadsheet tracking student’s grades from progress reports. Students with a C- or worse are reported. A plan to raise the student’s grade is also identified.</i>
<b>G</b> <input type="checkbox"/>	<b>Yearly Advising Form</b> – <i>form that tracks student’s classes three semesters ahead to ensure classes are degree applicable.</i>
<b>H</b> <input type="checkbox"/>	<b>Practice/Class Schedule Spreadsheet</b> – <i>Spreadsheet given to each student detailing class schedule, practice schedule and tutor appointments.</i>

<b>I</b> <input type="checkbox"/>	<b>Weekly Task list</b> – <i>A Task list detailing student athlete’s assignment and day to be completed. Completed weekly.</i>
<b>J</b> <input type="checkbox"/>	<b>Coaches Report</b> – <i>Report provided to coaches detailing student’s grades, tutoring and mentor appointments distributed throughout the semester.</i>
<b>K</b> <input type="checkbox"/>	<b>Weekly/Bi-weekly Meetings</b> – <i>student athlete meet with advisor/learning specialist/intern/mentor once a week or once every other week</i>
<b>L</b> <input type="checkbox"/>	<b>College advising Meeting</b> – <i>student athletes are required to meet with their college advisor.</i>
<b>M</b> <input type="checkbox"/>	<b>Coaches Meetings</b> – <i>meetings with coaches discussing each student’s academic standing.</i>
<b>N</b> <input type="checkbox"/>	<b>Study Hall Hours</b> – <i>hours student athletes need to complete weekly doing academic tasks or tutoring.</i>
<b>O</b> <input type="checkbox"/>	<b>Tutor Services</b> – <i>tutoring services provided by the academic service for student athletes office.</i>
<b>P</b> <input type="checkbox"/>	<b>WRAT/ADHD Testing</b> – <i>student athletes with perceived learning disabilities are tested.</i>
<b>Q</b> <input type="checkbox"/>	<b>Accommodations</b> – <i>accommodations provided by university’s accessibility/disability services office.</i>
<b>S</b> <input type="checkbox"/>	<b>Mentor Program</b> – <i>Weekly meetings between student athlete and an academic mentor. Mentors provide advice and mentoring for student athlete during the academic semester.</i>
<b>T</b> <input type="checkbox"/>	<b>Classification System/Program</b> – <i>Student athletes are coded upon enrollment according to their academic risk. Each year the student’s code is reanalyzed and dependent upon their grade and level of academic work.</i>

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## Student Athlete's Learning Style

**Q8. Please select each of item from the list that closely represents the tool and resources used by your office that you would utilize for the student athlete who you chose to answer question 7. Check all that apply.**

<b>A</b> <input type="checkbox"/>	<b>Semester at a Glance</b> – spreadsheet detailing class assignments and grades for the semester.
<b>B</b> <input type="checkbox"/>	<b>Progress Reports</b> – reports given to student's instructors to report student's current grade in the class. Given to instructors to complete twice a semester.
<b>C</b> <input type="checkbox"/>	<b>Travel Letters</b> – Letters given to instructors by student athletes to sign that detail the dates the student will be absent from class while competing.
<b>D</b> <input type="checkbox"/>	<b>Watchlist</b> – Spreadsheet tracking student's grades from progress reports. Students with a C- or worse are reported. A plan to raise the student's grade is also identified.
<b>E</b> <input type="checkbox"/>	<b>Yearly Advising Form</b> – form that tracks student's classes three semesters ahead to ensure classes are degree applicable.
<b>F</b> <input type="checkbox"/>	<b>Practice/Class Schedule Spreadsheet</b> – Spreadsheet given to each student detailing class schedule, practice schedule and tutor appointments.
<b>G</b> <input type="checkbox"/>	<b>Weekly Task list</b> – A Task list detailing student athlete's assignment and day to be completed. Completed weekly.
<b>H</b> <input type="checkbox"/>	<b>Coaches Report</b> – Report provided to coaches detailing student's grades, tutoring and mentor appointments distributed throughout the semester.
<b>I</b> <input type="checkbox"/>	<b>Weekly/Bi-weekly Meetings</b> – student athlete meet with advisor/learning specialist/intern/mentor once a week or once every other week
<b>J</b> <input type="checkbox"/>	<b>College advising Meeting</b> – student athletes are required to meet with their college advisor.
<b>K</b> <input type="checkbox"/>	<b>Coaches Meetings</b> – meetings with coaches discussing each student's academic standing.
<b>L</b> <input type="checkbox"/>	<b>Study Hall Hours</b> – hours student athletes need to complete weekly doing academic tasks or tutoring.
<b>M</b> <input type="checkbox"/>	<b>Tutor Services</b> – tutoring services provided by the academic service for student athletes office.
<b>N</b> <input type="checkbox"/>	<b>WRAT/ADHD Testing</b> – student athletes with perceived learning disabilities are tested.

<b>O</b> <input type="checkbox"/>	<b>Accommodations</b> – accommodations provided by university’s accessibility/disability services office.
<b>P</b> <input type="checkbox"/>	<b>Mentor Program</b> – Weekly meetings between student athlete and an academic mentor. Mentors provide advice and mentoring for student athlete during the academic semester.
<b>Q</b> <input type="checkbox"/>	<b>Classification System/Program</b> – Student athletes are coded upon enrollment according to their academic risk. Each year the student’s code is reanalyzed and dependent upon their grade and level of academic work.

**Thank you for your time; your help is greatly appreciated.**

## APPENDIX B: ANNOUNCEMENT EMAIL

Date

Dear Participant,

Three days from now you will receive an email request to complete a brief questionnaire for an important research project being conducted by University of Central Florida.

It concerns the academic advising for student athletes that may be related to the academic success of student athletes.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. The study is an important one that will help advisors better understand the tools and resources available to help the academic success for student athletes as well as the learning styles of academic advisors for student athletes and the student athletes.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Sincerely,

Dianna Lampitt  
Doctoral Student  
Academic Services for Student Athletes  
University of Central Florida



APPENDIX C: WELCOME EMAIL WITH QUESTIONNAIRE LINK

Date

Dear Participant,

I am writing to ask your help in a study of tools and resources used by academic advisors for student athletes. This study is intended to explore the tools that academic advisors for student athletes use to ensure the academic success for student athletes.

It's my understanding that you may be in either an academic advisor or learning specialist, which is directly involved in advising student athletes or a learning specialist. We are contacting a random sample of advisors like you, conference wide to ask about their tools and resources that they use when working with student athletes.

Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you return your completed questionnaire, your name will be deleted from the mailing list and never connected to your answers in any way. This survey is voluntary. However, you can help us very much by taking a few minutes to share your experiences and opinions about academic advising. If for some reason you prefer not to respond, please let us know.

If you have any questions or comments, we would be happy to talk with you. Our number is (765) 730-2805, or you can write to the email address located at the end of the questionnaire.

Thank you very much for helping with this important study.

Sincerely,

Dianna Lampitt  
Doctoral Student  
Academic Services for Student Athletes  
University of Central Florida

## APPENDIX D: THANK YOU EMAIL

Last week a questionnaire seeking your opinions about academic advising was emailed to you.

If you have completed and return the questionnaire to me, please accept my sincere thanks. I appreciate the time you dedicated to answering the questionnaire.

If you are interested in learning more about the study, please contact me as at (765) 730-2805 or [dianna.lampitt@ucf.edu](mailto:dianna.lampitt@ucf.edu).

Thank you again for your participation in the study.

Dianna Lampitt  
Doctoral Student  
Academic Services for Student Athletes  
University of Central Florida

APPENDIX E: REMINDER EMAIL

Date

Dear Participant,

About a week ago, I sent a questionnaire to you asking for your opinions of academic advising for student athletes in your organization. To date, we have not received it.

The comments of people who have already responded revealed a wide variety of advising issues in academic advising for student athletes. Many have described their opinions, both positive and negative, of the current state of academic advising in their organizations. We think the results are going to be very useful to decision makers in organizations.

We are writing again because of the importance that your questionnaire has for helping to get accurate results.

A few people have written to say that they should not have received the questionnaire because they are neither directly involved in nor able to observe the academic advising for student athletes. If either of these concerns applies to you, please let me know by emailing [dianna.lampitt@ucf.edu](mailto:dianna.lampitt@ucf.edu).

We hope you will return the questionnaire soon, but if for any reason you prefer not to answer it, please let me know.

Sincerely,

Dianna Lampitt  
Doctoral Student  
Academic Services for Student Athletes  
University of Central Florida

## APPENDIX F: IRB APPROVAL



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Dianna Lampitt**

Date: **December 16, 2016**

Dear Researcher:

On 12/16/2016, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: A Comprehensive Study Of The Learning Styles Of Student Athletes And Academic Advisors At Three Institutions In The American Athletic Conference And The Tools And Resources Used To Ensure The Academic Success Of Student Athletes.  
Investigator: Dianna Lampitt  
IRB Number: SBE-16-12714  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink, appearing to read "Gillian Amy Mary Morien".

Signature applied by Gillian Amy Mary Morien on 12/16/2016 01:11:04 PM EST

IRB Coordinator



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